

Olerup SSP[®] HLA-B*39

Product number:	101.566-12/04 – including <i>Taq</i> pol.
Lot number:	46F
Expiry date:	2011-February-01
Number of tests:	12 tests – Product No. 101.566-12 4 tests – Product No. 101.566-04
Number of wells per test:	32
Storage - pre-aliquoted primers:	dark at -20°C
- PCR Master Mix:	-20°C
- Adhesive PCR seals	RT
- Product Insert	RT

This Product Description is only valid for Lot No. 46F.

**CHANGES COMPARED TO THE PREVIOUS OLERUP SSP[®]
HLA-B*39 LOT**

The HLA-B*39 specificity and interpretation tables have been updated for the HLA-B alleles described since the previous *Olerup SSP[®]* HLA-B*39 lot was made (Lot No. Y49).

The primers of the wells detailed below have been exchanged, added or modified compared to the previous lot of the HLA-B*39 kit.

Well	5'-primer	3'-primer	rationale
3	-	-	Exchanged positive control primer pair.
8	Added	Added	Primer pair added for the B*3946 allele.
11	-	Added	3'-primer added to improve resolution of the B*3940N allele.
13	Moved	Moved	Primer pairs exchanged with well 20 to improve resolution, and exchanged positive control primer pair.
16	Added	-	Primer added for the B*3909 allele.
20	Moved	Moved	Primer pair from well 13.
22	Added	Added	Primer added for the B*3945 allele.
32	Added	Added	Primer added for the B*3941 allele.

PRODUCT DESCRIPTION

HLA-B*39 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the B*3901 to B*3946 alleles.

PLATE LAYOUT

Each test consists of 32 PCR reactions in a 32 well cut PCR plate.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32

The 32 well cut PCR plate is marked with ‘HLA-B*39’ in silver/gray ink.

Well No. 1 is marked with the Lot Number ‘46F’.

The PCR plates are covered with a PCR-compatible foil.

Please note: When removing each 32 well PCR plate, make sure that the remaining plates stay covered. Use a scalpel or a similar instrument to carefully cut the foil between the plates.

INTERPRETATION

The interpretation of HLA-B*39 SSP subtypings will be influenced by the B*07, the B*08, the B*13, the B*14, most B*15, the B*18, the B*27, B*35, the B*37, the B*38, many B*40, several B*41, the B*42, several B*44, the B*45, four B*46, the B*47, the B*48, several B*51, three B*52, the B*53, the B*54, the B*55, the B*56, the B*57, most B*58, the B*59, the B*67, the B*7301, two B*78, the B*81, the B*82 and the B*8301 alleles when present on the other haplotype. In addition, the Cw*1515 allele will be amplified by primer mix 28.

UNIQUELY IDENTIFIED ALLELES

All the HLA-B*39 alleles, i.e. **B*3901 to B*3946**, recognized by the HLA Nomenclature Committee in January 2009¹ will give rise to unique amplification patterns by the primers in the HLA-B*39 subtyping kit².

The HLA-B*39 subtyping kit cannot distinguish the B*39010101, B*390103 and B*390106 alleles or the B*390601 and B*390602 alleles or the B*391301 and B*391302.

¹HLA-B alleles listed on the IMGT/HLA web page 2009-January-23, release 2.24.0, www.ebi.ac.uk/imgt/hla.

²The B*3910 and B*670102 alleles will give rise to identical amplification patterns with the HLA-B*39 subtyping kit. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*67 kits.

RESOLUTION IN HOMO- AND HETEROZYGOTES

The 45 HLA-B*39 alleles give rise to 50 different amplification patterns. These can be combined in 1 275 homozygous and heterozygous combinations. 652 of these genotypes do not give rise to unique amplification patterns. In these calculations the different sizes of the specific PCR products in lanes 7, 8, 10, 16, 20, 22 and 27 were not considered.

+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390201,3937 = 3903,3913
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390202,3937 = 3913,3937
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3908 = 3908,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390202,3907 = 3907,3913
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3912 = 3908,3931
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3918 = 3913,3918
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3928 = 3908,3945
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3933 = 3908,3940N =
		3913,3933 = 3913,3940N
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3930 = 3908,3943
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3908,3941 = 3908,3942
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3901,3908 = 390201,3911 =
		3908,3936 = 3913,3936
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390104,3908 = 390202,3911 =
		3905,3908 = 3908,3911 =
		3911,3913
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390201,3943 = 390202,3943 =
		3913,3930 = 3913,3943
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3913,3941 = 3913,3942
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3901,3913 = 390201,3905
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390104,3913 = 390202,3905 =
		3905,3913
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3937 = 3937,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3914 = 3907,3929
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3905,3917 = 3910,3937 =
		3917,3937 = 3920,3937
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3912,3937 = 3931,3937
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3905,3924 = 3937,3941
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3901,3937 = 3903,3905
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	390104,3937 = 3905,3937
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3903,3943 = 3930,3937 =
		3937,3943
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3924,3937 = 3937,3942
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3907 = 3907,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3911 = 3911,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3943 = 3943,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3904,3905 = 3905,3946
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3933 = 3907,3940N
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3910 = 3907,3920
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3912 = 3907,3931
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3928 = 3907,3945
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3930 = 3907,3943
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3907,3941 = 3907,3942
+++----+ - - - - - - - - -	- +- - - - + + - - - - - - - -	3901,3907 = 3907,3915 =
		3907,391902

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+++-----	-+-----	--+-----	-----	390104,3907 = 3905,3907 =
				3907,3907 = 3907,391901
+++-----	-+-----	--+-----	-----+	391901,3943 = 391902,3943
+++-----	--+-----	--+-----	-----	3920,3933 = 3920,3940N
+++-----	--+-----	--+-----	-----	3910,3911 = 3911,3920
+++-----	--+-----	--+-----	-----	3911,3912 = 3911,3931
+++-----	--+-----	--+-----	-----	3905,3918 = 3911,3918
+++-----	--+-----	--+-----	-----	3911,3928 = 3911,3945
+++-----	--+-----	--+-----	-----	3905,3933 = 3905,3940N =
				3911,3933 = 3911,3940N
+++-----	--+-----	--+-----	-----+	3911,3930 = 3911,3943
+++-----	--+-----	--+-----	-----+	3911,3941 = 3911,3942
+++-----	--+-----	--+-----	-----	3901,3911 = 3905,3936 =
				3911,3936
+++-----	--+-----	--+-----	-----	390104,3911 = 3905,3911 =
				3911,3911
+++-----	-----+	--+-----	-----+	3910,3943 = 3920,3930 =
				3920,3943
+++-----	-----+	--+-----	-----+	3920,3941 = 3920,3942
+++-----	-----+	--+-----	-----	390104,3920 = 3905,3910 =
				3905,3920
+++-----	-----+	--+-----	-----+	3912,3943 = 3931,3943
+++-----	-----+	--+-----	-----	3905,3912 = 3905,3931
+++-----	-----	--+-----	-----	3905,3928 = 3905,3945
+++-----	-----	--+-----	-----+	3901,3943 = 390104,3943 =
				3905,3930 = 3905,3943
+++-----	-----	--+-----	-----+	3905,3941 = 3905,3942
+++-----	-----	--+-----	-----	390104,3905 = 3905,3905
++-----	-----	-+-----	-----	390201,3926 = 390202,3926
++-----	-----	-+-----	-----	3904,3926 = 3926,3946
++-----	-+-----	-+-----	-----	391901,3926 = 391902,3926
++-----	--+-----	-+-----	-----	3926,3933 = 3926,3940N
++-----	-----+	--+-----	-----	3912,3926 = 3926,3931
++-----	-----	--+-----	-----	3926,3928 = 3926,3945
++-----	-----	--+-----	-----+	3926,3941 = 3926,3942
++-----	-----	--+-----	-----	3901,3926 = 390104,3926 =
				3926,3926
++-----	-----+	-+-----	-----	390201,3929 = 390202,3929
++-----	-----+	-+-----	-----	390201,3914 = 390202,3914
++-----	-----	-+-----	-----+	390201,3924 = 390202,3924
++-----	-----	-+-----	-----	390201,3903 = 390202,3903
++-----	-----	-+-----	-----	390201,3904 = 390201,3946 =
				390202,3946
++-----	-----	-+-----	-----	3904,3939 = 3939,3946
++-----	-+-----	-+-----	-----+	390201,3906 = 390202,3906
++-----	-+-----	-+-----	-----	390201,391901 = 390201,391902 =
				390202,391902
++-----	-+-----	-+-----	-----	391901,3939 = 391902,3939
++-----	--+-----	-+-----	-----	3923,3933 = 3923,3940N
++-----	--+-----	-+-----	-----+	390201,3918 = 390202,3918
++-----	--+-----	-+-----	-----	390201,3933 = 390201,3940N =
				390202,3933 = 390202,3940N
++-----	--+-----	-+-----	-----	390201,3936 = 390202,3936

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++-+---	--+-----	--+---++	---+-----	3933,3939 = 3939,3940N
++-+---	---+-----	-+---++	-----	390201,3915 = 390202,3915
++-+---	---+-----	+++---++	-----	390105,3923 = 390201,3927 = 390202,3927 = 3923,3927
++-+---	---+-----	-+---++	-----+	3923,3941 = 3923,3942
++-+---	---+-----	-+---++	-----	3901,3923 = 390201,3944 = 390202,3944 = 3923,3944
++-+---	-----+	-+---++	-----	390201,3912 = 390201,3931 = 390202,3931
++-+---	-----+	--+---++	-----	3912,3939 = 3931,3939
++-+---	-----+	+++---++	-----	390201,3909 = 390202,3909
++-+---	-----	+++---++	-----	390201,3925N = 390202,3925N
++-+---	-----	-+---++	-----	390105,390201 = 390105,390202
++-+---	-----	-+---++	-----	390201,3928 = 390201,3945 = 390202,3928
++-+---	-----	-+---++	+-----	39010102L,390201 = 39010102L,390202
++-+---	-----	-+---++	--+-----	390201,3932 = 390202,3932
++-+---	-----	-+---++	--+-----	390201,3938Q = 390202,3938Q
++-+---	-----	-+---++	-----+	390201,3934 = 390202,3934
++-+---	-----	-+---++	-----+	390201,3935 = 390202,3935
++-+---	-----	-+---++	-----+	390201,3930 = 390202,3930
++-+---	-----	-+---++	-----+	390201,3941 = 390201,3942 = 390202,3941 = 390202,3942
++-+---	-----	-+---++	-----	3901,390201 = 3901,390202 = 390104,390201 = 3922,3939
++-+---	-----	-+---++	-----	390201,3922 = 390202,3922
++-+---	-----	--+---++	-----	3928,3939 = 3939,3945
++-+---	-----	--+---++	-----+	3939,3941 = 3939,3942
++-+---	-----	--+---++	-----	3901,3939 = 390104,3939
++-+---	---+-----	--+---++	-----	3904,3929 = 3929,3946
++-+---	---+-----	--+---++	-----	3904,3914 = 3914,3946
++-+---	---+-----	--+---++	-----+	3904,3924 = 3924,3946
++-+---	---+-----	--+---++	-----	3903,3904 = 3903,3946
++-+---	-+-----	--+---++	-----	391901,3929 = 391902,3929
++-+---	-+-----	--+---++	-----	3914,391901 = 3914,391902
++-+---	-+-----	--+---++	-----+	391901,3924 = 391902,3924
++-+---	-+-----	--+---++	-----	3903,391901 = 3903,391902
++-+---	--+-----	--+---++	---+-----	3917,3933 = 3917,3940N
++-+---	---+-----	--+---++	-----	3910,3929 = 3917,3929
++-+---	---+-----	--+---++	-----	3912,3929 = 3929,3931
++-+---	---+-----	-+++---++	-----	390105,3929 = 3909,3929
++-+---	---+-----	--+---++	-----	3901,3929 = 390104,3929 = 3914,3915 = 3915,3929
++-+---	---+-----	--+---++	-----+	3924,3929 = 3929,3942
++-+---	---+-----	--+---++	-----	3903,3929 = 3914,3929 = 3929,3929
++-+---	---+-----	--+---++	-----	3910,3914 = 3914,3917
++-+---	---+-----	--+---++	-----	3903,3916 = 3914,3916
++-+---	---+-----	--+---++	-----+	3910,3924 = 3917,3924 = 3917,3941 = 3917,3942
++-+---	---+-----	--+---++	-----	3901,3917 = 3903,3910 = 3903,3917

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++-+--+	-----++	--+--+++	-----	3912,3914 = 3914,3931
++-+--+	-----+-	--+--+++	-----+	3912,3924 = 3924,3931
++-+--+	-----+-	--+--+++	-----	3903,3912 = 3903,3931
++-+--+	-----+	--+++--+	-----	390105,3914 = 3903,3909 = 3909,3914
++-+--+	-----+	--+--+++	-----	3901,3914 = 390104,3914
++-+--+	-----+	--+--+++	-----+	3914,3924 = 3914,3942
++-+--+	-----+	--+--+++	-----	3903,3914 = 3914,3914
++-+--+	-----	--+--+++	-----+	3901,3924 = 390104,3924 = 3903,3941 = 3924,3941
++-+--+	-----	--+--+++	-----	3901,3903 = 390104,3903
++-+--+	-----	--+--+++	-----+	3903,3924 = 3903,3942 = 3924,3924 = 3924,3942
++-+--+	+-----	--+--+++	-----+	3904,3906 = 3906,3946
++-+--+	-+-----	--+--+++	-----	3904,391902 = 391901,3946 = 391902,3946
++-+--+	--+-----	--+++--+	-----+-	3904,3918 = 3918,3946
++-+--+	--+-----	--+--+++	-----+	3904,3933 = 3904,3940N = 3933,3946 = 3940N,3946
++-+--+	--+-----	--+--+++	-----	3904,3936 = 3936,3946
++-+--+	---+-----	--+--+++	-----	3904,3915 = 3915,3946
++-+--+	---+-----	--+++--+	-----	3904,3927 = 3927,3946
++-+--+	---+-----	--+--+++	-----	3904,3944 = 3944,3946
++-+--+	---+-----	--+--+++	-----	3904,3931 = 3912,3946 = 3931,3946
++-+--+	---+-----	--+++--+	-----	3904,3909 = 3909,3946
++-+--+	---+-----	+--+--+	-----	3904,3925N = 3925N,3946
++-+--+	---+-----	+--+--+	-----	3904,3922 = 3922,3946
++-+--+	---+-----	--+++--+	-----	390105,3904 = 390105,3946
++-+--+	---+-----	--+--+++	-----	3904,3928 = 3928,3946 = 3945,3946
++-+--+	---+-----	--+--+++	+-----	39010102L,3904 = 39010102L,3946
++-+--+	---+-----	--+--+++	--+-----	3904,3932 = 3932,3946
++-+--+	---+-----	--+--+++	--+-----	3904,3938Q = 3938Q,3946
++-+--+	---+-----	--+--+++	---+-----	3904,3934 = 3934,3946
++-+--+	---+-----	--+--+++	---+-----	3904,3935 = 3935,3946
++-+--+	---+-----	--+--+++	---+-----	3904,3930 = 3930,3946
++-+--+	---+-----	--+--+++	---+-----	3904,3941 = 3904,3942 = 3941,3946 = 3942,3946
++-+--+	---+-----	--+--+++	---+-----	3901,3904 = 3901,3946 = 390104,3904 = 390104,3946 = 3904,3946 = 3946,3946
++-+---	++-----	--+--+++	---+-----	3906,391901 = 3906,391902
++-+---	+-----+	--+--+++	---+-----	3906,3912 = 3906,3931
++-+---	+-----	--+--+++	---+-----	3901,3906 = 390104,3906
++-+---	+-----	--+++--+	---+-----	3918,391901 = 3918,391902
++-+---	+-----	--+--+++	---+-----	391901,3933 = 391901,3940N = 391902,3933 = 391902,3940N
++-+---	+-----	--+--+++	---+-----	391901,3936 = 391902,3936
++-+---	+-----	--+--+++	---+-----	3915,391901 = 3915,391902
++-+---	+-----	--+++--+	---+-----	391901,3927 = 391902,3927
++-+---	+-----	--+--+++	---+-----	391901,3944 = 391902,3944

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++-+-----	-+-----+	--+--+---	-----	3912,391902 = 391901,3931 = 391902,3931
++-+-----	-+-----+	--+--+---	-----	3909,391901 = 3909,391902
++-+-----	-+-----+	--+--+---	-----	391901,3925N = 391902,3925N
++-+-----	-+-----+	--+--+---	-----	391901,3922 = 391902,3922
++-+-----	-+-----+	--+--+---	-----	390105,391901 = 390105,391902
++-+-----	-+-----+	--+--+---	-----	391901,3928 = 391902,3928 = 391902,3945
++-+-----	-+-----+	--+--+---	+-----	39010102L,391901 = 39010102L,391902
++-+-----	-+-----+	--+--+---	--+-----	391901,3932 = 391902,3932
++-+-----	-+-----+	--+--+---	--+-----	391901,3938Q = 391902,3938Q
++-+-----	-+-----+	--+--+---	-----+--	391901,3934 = 391902,3934
++-+-----	-+-----+	--+--+---	-----+--	391901,3935 = 391902,3935
++-+-----	-+-----+	--+--+---	-----+--	391901,3930 = 391902,3930
++-+-----	-+-----+	--+--+---	-----+--	391901,3941 = 391901,3942 = 391902,3941 = 391902,3942
++-+-----	-+-----+	--+--+---	-----	3901,391901 = 3901,391902 = 390104,391902 = 391901,391902 = 391902,391902
++-+-----	--+-----	--+--+---	-----	3915,3933 = 3915,3940N
++-+-----	--+-----	--+--+---	-----	3927,3933 = 3927,3940N
++-+-----	--+-----	--+--+---	-----+--	3918,3927 = 3918,3944
++-+-----	--+-----	--+--+---	-----	3933,3944 = 3940N,3944
++-+-----	--+-----	--+--+---	-----	3910,3933 = 3910,3940N
++-+-----	--+-----	--+--+---	-----+--	3912,3918 = 3918,3931
++-+-----	--+-----	--+--+---	-----	3912,3933 = 3912,3940N = 3931,3933 = 3931,3940N
++-+-----	--+-----	--+--+---	-----	3912,3936 = 3931,3936
++-+-----	--+-----	--+--+---	-----	3909,3933 = 3909,3940N
++-+-----	--+-----	--+--+---	-----	3925N,3933 = 3925N,3940N
++-+-----	--+-----	--+--+---	-----	3922,3933 = 3922,3940N
++-+-----	--+-----	--+--+---	-----+--	3918,3928 = 3918,3945
++-+-----	--+-----	--+--+---	-----+--	3918,3933 = 3918,3940N
++-+-----	--+-----	--+--+---	-----	390105,3933 = 390105,3940N
++-+-----	--+-----	--+--+---	-----+--	3918,3941 = 3918,3942
++-+-----	--+-----	--+--+---	-----+--	3901,3918 = 390104,3918 = 390105,3918 = 3918,3918 = 3918,3935 = 3918,3936
++-+-----	--+-----	--+--+---	-----	3928,3940N = 3933,3945 = 3940N,3945
++-+-----	--+-----	--+--+---	+-----	39010102L,3933 = 39010102L,3940N
++-+-----	--+-----	--+--+---	--+-----	3932,3940N = 3933,3938Q = 3938Q,3940N
++-+-----	--+-----	--+--+---	-----+--	3933,3935 = 3935,3940N
++-+-----	--+-----	--+--+---	-----+--	3933,3941 = 3940N,3941 = 3940N,3942
++-+-----	--+-----	--+--+---	-----	3901,3933 = 3901,3940N = 390104,3933 = 390104,3940N = 3933,3940N = 3936,3940N = 3940N,3940N
++-+-----	--+-----	--+--+---	-----	3901,3936 = 390104,3936

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++-+-----	----+----	--+----++	-----	3912,3915 = 3915,3931
++-+-----	----+----	--+----++	-----	3915,3928 = 3915,3945
++-+-----	----+----	--+----++	-----+	3915,3941 = 3915,3942
++-+-----	----+----	--+----++	-----	3901,3915 = 390104,3915 = 3915,3915
++-+-----	----+----	--+----++	-----	3912,3927 = 3927,3931
++-+-----	----+----	--+----++	-----	3912,3944 = 3931,3944
++-+-----	----+----	--+----++	-----	3909,3927 = 3909,3944
++-+-----	----+----	--+----++	-----	3927,3928 = 3927,3945
++-+-----	----+----	--+----++	-----+	3927,3941 = 3927,3942
++-+-----	----+----	--+----++	-----	3901,3927 = 390104,3927 = 390105,3927 = 390105,3944 = 3927,3927 = 3927,3944
++-+-----	----+----	--+----++	-----	3928,3944 = 3944,3945
++-+-----	----+----	--+----++	-----+	3941,3944 = 3942,3944
++-+-----	----+----	--+----++	-----	3901,3944 = 390104,3944 = 3944,3944
++-+-----	----+----	--+----++	-----	390105,3916 = 3909,3910 = 3909,3916
++-+-----	----+----	--+----++	-----+	3910,3941 = 3910,3942
++-+-----	----+----	--+----++	-----	3909,3912 = 3909,3931
++-+-----	----+----	++-+----	-----	3912,3925N = 3925N,3931
++-+-----	----+----	++-+----	-----	3912,3922 = 3922,3931
++-+-----	----+----	++-+----	-----	390105,3912 = 390105,3931
++-+-----	----+----	++-+----	-----	3912,3928 = 3928,3931 = 3931,3945
++-+-----	----+----	++-+----	-----	39010102L,3912 = 39010102L,3931
++-+-----	----+----	++-+----	-----	3912,3932 = 3931,3932
++-+-----	----+----	++-+----	-----	3912,3938Q = 3931,3938Q
++-+-----	----+----	++-+----	-----+	3912,3934 = 3931,3934
++-+-----	----+----	++-+----	-----+	3912,3935 = 3931,3935
++-+-----	----+----	++-+----	-----+	3912,3930 = 3930,3931
++-+-----	----+----	++-+----	-----+	3912,3941 = 3912,3942 = 3931,3941 = 3931,3942
++-+-----	----+----	++-+----	-----	3901,3912 = 3901,3931 = 390104,3912 = 390104,3931 = 3912,3931 = 3931,3931
++-+-----	----+----	++-+----	-----	3909,3928 = 3909,3945
++-+-----	----+----	++-+----	-----+	3909,3941 = 3909,3942
++-+-----	----+----	++-+----	-----	3901,3909 = 390104,3909 = 390105,3909 = 3909,3909
++-+-----	----+----	++-+----	-----	3925N,3928 = 3925N,3945
++-+-----	----+----	++-+----	-----+	3925N,3941 = 3925N,3942
++-+-----	----+----	++-+----	-----	3901,3925N = 390104,3925N = 3925N,3925N
++-+-----	----+----	++-+----	-----	3922,3928 = 3922,3945
++-+-----	----+----	++-+----	-----+	3922,3941 = 3922,3942
++-+-----	----+----	++-+----	-----	3901,3922 = 390104,3922
++-+-----	----+----	++-+----	-----	390105,3928 = 390105,3945
++-+-----	----+----	++-+----	-----+	390105,3941 = 390105,3942
++-+-----	----+----	++-+----	-----	3901,390105 = 390104,390105 = 390105,390105
++-+-----	----+----	++-+----	-----	39010102L,3928 = 39010102L,3945

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++-+-----	-----	--+-----	--+-----	3928,3938Q = 3938Q,3945
++-+-----	-----	--+-----	-----+--	3928,3935 = 3935,3945
++-+-----	-----	--+-----	-----+--	3928,3941 = 3941,3945 = 3942,3945
++-+-----	-----	--+-----	-----	3901,3928 = 3901,3945 = 390104,3928 = 390104,3945 = 3928,3945
++-+-----	-----	--+-----	+-----+	39010102L,3941 = 39010102L,3942
++-+-----	-----	--+-----	+-----+	3901,39010102L = 39010102L,39010102L = 39010102L,390104
++-+-----	-----	--+-----	--++-----	3901,3932 = 390104,3932 = 3932,3938Q
++-+-----	-----	--+-----	--+-----+	3938Q,3941 = 3938Q,3942
++-+-----	-----	--+-----	--+-----	3901,3938Q = 390104,3938Q = 3938Q,3938Q
++-+-----	-----	--+-----	-----+--	3901,3934 = 390104,3934
++-+-----	-----	--+-----	-----+--	3935,3941 = 3935,3942
++-+-----	-----	--+-----	-----+--	3901,3935 = 390104,3935 = 3935,3935
++-+-----	-----	--+-----	-----+--	3901,3930 = 390104,3930
++-+-----	-----	--+-----	-----+--	3901,3941 = 3901,3942 = 390104,3941 = 390104,3942 = 3941,3941 = 3941,3942
++-+-----	-----	--+-----	-----	3901,3901 = 3901,390104
+--+-----	--+-----	-++-----	-----	3908,3910 = 3908,3920
+--+-----	--+-----	-++-----	-----	390202,3908 = 3908,3908 = 3908,3913
+--+-----	--+-----	-++-----	-----	390202,3920 = 3910,3913 = 3913,3920
+--+-----	--+-----	-++-----	-----	390202,3913 = 3913,3913
+--+-----	--+-----	-++-----	-----	3910,3920 = 3920,3920
+-----+	-----	-++-----	-----	390201,3939 = 390202,3939
+-----+	-----	-++-----	-----	390201,390201 = 390201,390202
+-----+	-----	-++-----	-----	390202,3923 = 3923,3923
+-----+	-----	-++-----	-----	3910,3917 = 3917,3917
-++-----	-----	-++-----	-----+--	3930,3943 = 3943,3943
-++-----	+-----	-++-----	-----+--	3906,3930 = 3906,3934
-++-----	--+-----	-++-----	--++-----	3932,3933 = 3932,3936
-++-----	--+-----	-++-----	--++-----	3933,3933 = 3933,3936
-++-----	--+-----	-++-----	-----+--	3930,3934 = 3934,3934

3901 = 39010101,390103 and 390106
3906 = 390601-390602
3913 = 391301-391302

SPECIFICITY TABLE

HLA-B*39 SSP subtyping

Specificities and sizes of the PCR products of the 32 primer mixes used for HLA-B*39 SSP subtyping

Primer Mix	Size of spec. PCR product ¹	Size of control band ²	Amplified HLA-B*39 alleles ³	Other amplified HLA-Class I alleles ⁴
1	230 bp	800 bp	39010101- 39010102L, 390103-3905, 3907-3920, 3922-3929, 3931, 3935, 3937-3941, 3944-3946	1569, 380101-3807, 3808 ^{weakly} , 3809, 3811- 3817, 5820, 670101- 6702
2	170 bp	1070 bp	39010101- 39010102L, 390103-390106, 3903-390602, 3907 [?] , 3909, 3911, 3912, 3914, 3915, 3918-391902, 3922, 3924- 3938Q, 3940N- 3946	1401-1409, 1509, 1510, 1518, 1523, 1537, 1551, 1552, 1572, 1580, 1590, 1593, 1599, 9508, 9514, 9515, 9519, 9524, 9533, 9534, 380101-380202, 3804, 3805, 3808-3815, 3817
3	200 bp	800 bp	3905, 3907 [?] , 3908, 3911, 391301-391302, 3920, 3937, 3943	0716, 0727, 0737, 0738, 0750, 0803, 0823, 1503, 1509, 1510, 1518, 1523, 1529, 1537, 1538, 1547, 1549, 1551, 1552, 1554, 1562, 1564, 1568, 1569, 1572, 1574, 1580, 1590, 1591, 1593, 1598, 1599, 9503, 9508, 9514, 9515, 9519, 9523, 9524, 9527, 9531-9534, 9551, 180101-1815, 1817N- 1832, 3521, 3524, 3525, 370101-3714, 380101- 380202, 3804-3812, 3815, 3817, 4012, 480101-4819, 5137, 5145, 5163, 5302, 5306,

				5714, 5809, 5812
4⁵	145 bp	1070 bp	3926	
5⁵	105 bp	800 bp	39010101- 39010102L, 390103-390201, 3903-3909, 3911, 3912, 3914, 3915, 3918, 391902, 3922, 3924- 3946	1401-1409, 3526, 670101
6	170 bp	800 bp	390201-390202, 3908, 391301- 391302, 3923, 3939	0727, 0750, 0804, 0817, 1503, 1547, 1554, 1561, 1562, 1564, 1568, 1569, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 180101-1803, 1805, 1806, 1808-1815, 1817N-1828, 1830-1832, 370101-3714, 3803, 4012, 480101-4805, 4807-4819
7^{6,9}	165, 220 bp	1070 bp	3903, 3914, 3917, 3924, 3929, 3937	
8¹⁰	180, 390 bp	1070 bp	3904, 3946	3526
9	230 bp	800 bp	390601-390602	
10^{5,11}	105, 165 bp	800 bp	3907, 391901- 391902	1569, 3535, 3582, 3585, 5122, 7803
11⁸	170 bp	1070 bp	3908, 3911, 3918, 3933, 3936, 3940N	1318, 1558, 1573, 5410, 5509, 5521, 5619N
12	175 bp	800 bp	3907, 3915, 3929	1569, 3535
13⁵	85 bp	800 bp	3923, 3927, 3944	
14⁵	80 bp	1070 bp	3910, 3916, 3917, 3920	070201-0707, 0709, 0711, 0712, 0714-0726, 0728-0731, 0733-0735, 0737, 0739-0749N, 0751-0768, 151101- 151103, 1576, 9501, 9543, 9548, 3576, 4061, 4201, 4202, 4204-4209, 4506, 5401-5411, 5413- 5417, 550101-5505,

				5507-5517, 5519- 5533, 5601-5606, 5609-5613, 5615-5620, 5622-5624, 670101-670102, 8101- 8104N, 8201, 8202, 8301
15	190 bp	800 bp	3912, 3931	
16¹²	165, 220 bp	800 bp	3909, 3914, 3916, 3929	
17	180 bp	800 bp	3925N	
18	160 bp	800 bp	390201-390202, 3908, 391301- 391302, 3922, 3923	0817, 0838, 1503, 1547, 1549, 1554, 1561, 1562, 1568, 1569, 1574, 1591, 1598, 9503, 9523, 9527, 9531, 9532, 9551, 1812, 370101-3707, 3709- 3714, 3803, 3804, 4012, 480101-4805, 4807- 4815, 4817-4819
19	385 bp	1070 bp	39010101- 39010102L, 390103-390106, 3903-3907, 3909-3912, 3914-3920, 3924-3946	070201-0712, 0714- 0753, 0755-0764, 0766- 0768, 080101-0809, 0811-0816, 0818-0837, 1401-1409, 380101- 380202, 3805-3817, 4025 [?] , 4068 [?] , 4201, 4202, 4204-4209, 4806, 670101-670102, 7301, 8102
20^{5,7,13}	100, 215 bp	800 bp	390105, 3909, 3918, 3927	1569
21	220 bp	800 bp	39010101- 39010102L, 390103-390202, 3904, 3905, 3907-391302, 3915, 3917- 3920, 3922, 3923, 3925N- 3927, 3931, 3935, 3938Q- 3941, 3944- 3946	1569, 380101-3807, 3808 ^{weakly} , 3809, 3811- 3817, 5820, 670101- 6702
22^{5,14}	150, 225 bp	800 bp	3928, 3945	
23^{5,7}	85 bp	800 bp	39010101- 39010102L,	1401-1409, 670101

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			390103, 390105-390201, 3903, 3904, 390601-390602, 3909, 3912, 3914, 3915, 3918, 391902, 3922, 3924- 3936, 3938Q- 3946	
24	185 bp	1070 bp	39010101- 39010102L, 390103-390201, 3903, 3905- 390602, 3907 [?] , 3908, 3909, 3911, 3914, 3915, 3918, 391902, 3922, 3924-3944, 3946	1401, 1407N, 1408, 380101-3803, 3807- 3817, 670101
25	230 bp	1070 bp	39010102L	
26	265 bp	800 bp		1401-1404, 1407N, 1409
27^{5,15}	80, 185 bp	800 bp	3932, 3938Q	1315, 511301-511302, 5119, 5162, 5214
28⁸	180 bp	1070 bp	3932, 3933, 3940N	1303, 1558, 1573, 9533, 3503, 3506, 3513, 3536, 3538, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 3585, 4071, 4410, 4611, 511301-511302, 5115, 5162, 5214, 5304, 5403, 5601, 5602, 5604, 5607, 5608, 5611, 5613, 5614, 5616, 5617, 5619N, 5620, 5622, 5624, 5904, 8201, 8202, Cw*1515
29	245 bp	800 bp	390601-390602, 3934	0809, 1542, 1583, 3560, 4101, 4105-4107, 4204, 4508, 4618, 5121, 5136, 5401, 5402, 5404, 5405N, 5407, 5408N, 5410-5417, 550101- 5503, 5505, 5507, 5510- 5513, 5515-5521, 5523,

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				5525-5534, 5623, 5901-5903
30⁵	60 bp	800 bp	3918, 3935	1569
31^{5,8}	150 bp	800 bp	3930, 3934, 3943	0748, 0813, 0825, 1301-1304, 1306-1315, 1317, 1319, 1321-1323, 1505, 1520, 1531, 1552, 1555, 1586, 1591, 9507, 9514, 9523, 9524, 9551, 180101-1812, 1814, 1817N, 1818, 1820, 1822-1827, 1829, 1832, 2701-2703, 270502-270510, 2707-2709, 2711-2714, 2716, 2717, 2719, 2723, 2726-2739, 2741-2744, 350101-3507, 350901-3510, 3512, 3513, 3515-3517, 3519-352002, 3522-3534, 3536, 3537, 3539-3542, 3546-3557, 3559, 3560, 3563-3565Q, 356801-3572, 3574-3578, 3581-3585, 3588-3594, 3702, 400101-4004, 40060101-401403, 4018-4022N, 4024, 4025, 4027, 4029-4031, 4033-4040, 4042-4050, 4052-4066, 4068-4094, 440301-440303, 4407, 4410, 4413, 4426, 4430-4432, 4436-4440, 4443, 4445-4447, 4450, 4454, 4457, 4460, 4461, 446401-446402, 4606, 4611, 4613, 4618, 47010101-4705, 480101-4804, 4806, 4807, 4809-4814, 4816-4818, 510901-5110, 5115, 5131, 5140, 5142, 5203, 5210, 530101-5305, 5307, 5309, 5310, 5312-5315, 5401-5405N, 5407-5409, 5411-5417, 550201-

				550202, 5504, 5507, 5508, 5510, 5512, 5513, 5516, 5518, 5519, 5522, 5523, 5526, 5527, 5530, 5532, 5534, 5601, 5602, 5604, 5607-5612, 5614- 5620, 5622-5624, 570101-570103, 570301-570302, 5706- 5708, 5710, 5711, 5714- 5718, 580101-5802, 5804, 5807, 5809-5818, 5901-5904, 7301, 7804, 8101-8104N
32	230 bp	800 bp	3924, 3941, 3942	3535, 4429

¹Alleles are assigned by the presence of specific PCR product(s). However, the sizes of the specific PCR products may be helpful in the interpretation of HLA-B*39 SSP subtypings.

When the primers in a primer mix can give rise to specific PCR products of more than one length this is indicated if the size difference is 20 bp or more. Size differences shorter than 20 bp are not given. For high resolution SSP kits the length of the specific PCR product(s) of the alleles amplified by these primer mixes are given.

Nonspecific amplifications, i.e. a ladder or a smear of bands, may sometimes be seen. GC-rich primers have a higher tendency of giving rise to nonspecific amplifications than other primers.

PCR fragments longer than the control band may sometimes be observed. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

²The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*39 subtyping.

In addition, wells number 3, 5, 6, 9, 10, 12, 13, 15 to 18, 20 to 23, 26, 27, 29 to 32 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

³For many HLA-B alleles complete 4th exon nucleotide sequences are not available. In these instances it is not known whether some of the primers of the SSP sets are completely matched with the target sequences or not. We assume that unknown sequences in the 4th exon are conserved within allelic groups.

The B*3910 and B*670102 alleles will give rise to identical amplification patterns with the HLA-B*39 subtyping kit. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*67 kits.

⁴Due to the sharing of sequence motifs between HLA-B alleles, non-HLA-B*39 alleles will be amplified by primer mixes 1 to 3, 5, 6, 8, 10 to 12, 14, 18 to 21, 23, 24, 26 to 32. In addition, the Cw*1515 allele will be amplified by primer mix 28.

⁵Short specific PCR fragments are less intense and not as sharp as longer specific bands.

⁶The primer pairs in primer mix 7 may give rise to a primer oligomer artifact.

⁷Primer solutions 20 and 23 may yield less specific PCR product than the other HLA-B*39 primer mixes.

⁸Primer mixes 11, 28 and 31 have a tendency of giving rise to non-specific amplifications.

⁹Primer solution 7: Specific PCR fragment of 165 bp in the B*3917 allele. Specific PCR fragment of 220 bp in the B*3903, B*3914, B*3924, B*3929 and B*3937 alleles.

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¹⁰Primer solution 8: Specific PCR fragment of 180 bp in the B*3904 and in the B*3526 alleles. Specific PCR fragment of 390 bp in the B*3946 allele.

¹¹Primer solution 10: Specific PCR fragment of 105 bp in the B*391901-391902 and in the B*3582, B*3585, B*5122 and B*7803 alleles. Specific PCR fragment of 165 bp in the B*3907 and in the B*1569 and B*3535, alleles.

¹²Primer solution 16: Specific PCR fragment of 165 bp in the B*3914 and B*3929 alleles. Specific PCR fragment of 220 bp in the B*3909 and B*3916 alleles.

¹³Primer solution 20: Specific PCR fragment of 100 bp in the B*390105, B*3918 and B*3927 and in the B*1569 alleles. Specific PCR fragment of 215 bp in the B*3909 allele.

¹⁴Primer solution 22: Specific PCR fragment of 150 bp in the B*3945 allele. Specific PCR fragment of 225 bp in the B*3928 allele.

¹⁵Primer mix 27: Specific PCR fragment of 80 bp in the B*3932 and B*5119 alleles. Specific PCR fragment of 185 bp in the B*3938Q and B*1315, B*511301-511302, B*5162 and B*5214 alleles.

‘?’ , nucleotide sequence information not available for the primer matching sequence.

INTERPRETATION TABLE																
HLA-B*39 SSP subtyping																
Amplification patterns of the B*3901 to 3946 alleles																
	Well⁵															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Length of int.	800	1070	800	1070	800	800	1070	1070	800	800	1070	800	800	1070	800	800
pos. control ¹	800	1070	800	1070	800	800	1070	1070	800	800	1070	800	800	1070	800	800
5'-primer(s) ²	355	142	142	419	246	142	363	106	357	206	419	412	246	272	97	360
	5'-CCC ³	5'-TCT ³	5'-TCT ³	5'-gTT ³	5'-gAA ³	5'-TCT ³	5'-AgC ³	5'-CCA ³	5'-Tgg ³	5'-gAC ³	5'-gTT ³	5'-ATg ³	5'-gAA ³	5'-CTA ³	5'-TCg ³	5'-CAC ³
			419		246		420	646		419			503		97	368
			5'-gTC ³		5'-gAA ³		5'-TTA ³	5'-ACg ³		5'-gTC ³			5'-CCg ³		5'-TCC ³	5'-gTC ³
																419
																5'-gTA ³
3'-primer(s) ³	544	272	292	524	311	272	544	246	544	272	539	544	299	311	246	544
	5'-ggT ³	5'-TgC ³	5'-gTA ³	5'-CAA ³	5'-ggT ³	5'-Tgg ³	5'-ggT ³	5'-TAT ³	5'-ggT ³	5'-TgC ³	5'-TCC ³	5'-ggT ³	5'-TCA ³	5'-ggT ³	5'-TAT ³	5'-ggT ³
			583					916		544	564		544			
			5'-gTA ³					5'-gAC ³		5'-ggT ³	5'-ACT ³		5'-ggT ³			
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HLA-B allele ⁴																
*39010101, 390103, 390106	1	2			5											
*39010102L	1	2			5											
*390104	1	2			5											
*390105	1	2			5											
*390201	1				5	6										
*390202	1					6										
*3903	1	2			5		7									
*3904	1	2			5			8								
*3905	1	2	3		5											
*390601-390602		2			5				9							
*3907	1	?	?		5					10		12				
*3908	1		3		5	6					11					
*3909	1	2			5											16
*3910, 670102 ⁶	1												14			
*3911	1	2	3		5						11					
*3912	1	2			5										15	
*391301-391302	1		3			6										
*3914	1	2			5		7									16
*3915	1	2			5							12				
*3916	1													14		16
*3917	1						7							14		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

INTERPRETATION TABLE															
HLA-B*39 SSP subtyping															
Amplification patterns of the B*3901 to 3946 alleles															
Well ⁵															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230
			215		225					185					
800	800	1070	800	800	800	800	1070	1070	800	800	1070	800	800	800	800
407	142	44	246	363	142	246	103	-149	361	419	419	357	527	544	112
5'-ggg ^{3'}	5'-TCT ^{3'}	5'-ggC ^{3'}	5'-gAA ^{3'}	5'-Agg ^{3'}	5'-TCT ^{3'}	5'-gAA ^{3'}	5'-CCT ^{3'}	5'-ggg ^{3'}	5'-AgT ^{3'}	5'-gTT ^{3'}	5'-gTT ^{3'}	5'-Tgg ^{3'}	5'-TgA ^{3'}	5'-gAg ^{3'}	5'-CCT ^{3'}
			368		362					544					355
			5'-gTC ^{3'}		5'-gAC ^{3'}					5'-gAA ^{3'}					5'-TCA ^{3'}
			486												
			5'-ACg ^{3'}												
544	259	259	299	544	299	292	246	44	583	563	559	559	544	3 rd I	311
5'-ggT ^{3'}	5'-CTC ^{3'}	5'-gTT ^{3'}	5'-TCA ^{3'}	5'-ggT ^{3'}	5'-TCA ^{3'}	5'-gTC ^{3'}	5'-TAT ^{3'}	5'-CCg ^{3'}	5'-gTg ^{3'}	5'-CgA ^{3'}	5'-CAg ^{3'}	5'-CgT ^{3'}	5'-ggT ^{3'}	5'-TAT ^{3'}	5'-ggT ^{3'}
			544		544					583	564				544
			5'-ggT ^{3'}		5'-ggT ^{3'}					5'-gTg ^{3'}	5'-ACT ^{3'}				5'-ggT ^{3'}
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		19		21		23	24								
		19		21		23	24	25							
		19		21			24								
		19	20	21		23	24								
	18			21		23	24								
	18			21											
		19				23	24								
		19		21		23									
		19		21			24								
		19		21			24					29			
		19		21			?								
	18			21			24								
		19	20	21		23	24								
		19		21											
		19		21			24								
		19		21		23									
	18			21											
		19				23	24								
		19		21		23	24								
		19													
		19		21											
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Lot No.: **46F**

Lot-specific information

www.olerup.com

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*3918	1	2			5						11					
*391901	1	2								10						
*391902	1	2			5					10						
*3920	1		3											14		
*3922	1	2			5											
*3923	1					6							13			
*3924	1	2			5		7									
*3925N	1	2			5											
*3926	1	2		4	5											
*3927	1	2			5								13			
*3928	1	2			5											
*3929	1	2			5		7					12				16
*3930		2			5											
*3931	1	2			5										15	
*3932		2			5											
*3933		2			5						11					
*3934		2			5											
*3935	1	2			5											
*3936		2			5						11					
*3937	1	2	3		5		7									
*3938Q	1	2			5											
*3939	1				5	6										
*3940N	1	2			5						11					
*3941	1	2			5											
*3942		2			5											
*3943		2	3		5											
*3944	1	2			5								13			
*3945	1	2			5											
*3946	1	2			5			8								
*070201-0707, 0709, 0711, 0712, 0714, 0715, 0717-0726, 0728-0731, 0733-0735, 0739-0747, 0749N, 0751-0753, 0755-0764, 0766-0768, 4201, 4202, 420501-4209														14		
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **46F**

Lot-specific information

www.olerup.com

180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec. PCR product
			215		225					185						Well No.
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
		19	20	21		23	24						30			*3918
		19		21												*391901
		19		21		23	24									*391902
		19		21												*3920
	18			21		23	24									*3922
	18			21												*3923
		19				23	24							32		*3924
17		19		21		23	24									*3925N
		19		21		23	24									*3926
		19	20	21		23	24									*3927
		19			22	23	24									*3928
		19				23	24									*3929
		19				23	24						31			*3930
		19		21		23	24									*3931
		19				23	24			27	28					*3932
		19				23	24				28					*3933
		19				23	24					29		31		*3934
		19		21		23	24						30			*3935
		19				23	24									*3936
		19					24									*3937
		19		21		23	24			27						*3938Q
		19		21		23	24									*3939
		19		21		23	24				28					*3940N
		19		21		23	24								32	*3941
		19				23	24							32		*3942
		19				23	24							31		*3943
		19		21		23	24									*3944
		19		21	22	23										*3945
		19		21		23	24									*3946
		19														*070201-0707, 0709, 0711, 0712, 0714, 0715, 0717- 0726, 0728-0731, 0733- 0735, 0739-0747, 0749N, 0751-0753, 0755-0764, 0766-0768, 4201, 4202, 420501-4209
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **46F**

Lot-specific information

www.olerup.com

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*0708, 0710, 0732, 0736, 080101-0802, 0805-0808N, 0811, 0812, 0814-0816, 0818-0822, 0824, 0826- 0837																
*0716, 0737			3											14		
*0727, 0750			3			6										
*0738, 0803, 0823			3													
*0748, 8102														14		
*0754, 0765, 151101- 151103, 1576, 9501, 9543, 9548, 4506, 5406, 5514, 5524, 5603, 560501-5606, 8301														14		
*0804						6										
*0809																
*0813, 0825, 7301																
*0817, 1561						6										
*0838																
*1301-130204, 1304, 1306- 1314, 1317, 1319, 1321- 1323, 1505, 1520, 1531, 1555, 1586, 9507, 2701- 2703, 270502-270510, 2707- 2709, 2711-2714, 2716, 2717, 2719, 2723, 2726- 2739, 2741-2744, 350101- 350203, 350401-3505, 3507, 350901-3510, 3512, 3515-3517, 3519-352002, 3522, 3523, 3527-3534,																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **46F**

Lot-specific information

www.olerup.com

180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec.
			215		225					185						PCR product
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
		19														*0708, 0710, 0732, 0736, 080101-0802, 0805-0808N, 0811, 0812, 0814-0816, 0818-0822, 0824, 0826- 0837
		19														*0716, 0737
		19														*0727, 0750
		19														*0738, 0803, 0823
		19												31		*0748, 8102
																*0754, 0765, 151101- 151103, 1576, 9501, 9543, 9548, 4506, 5406, 5514, 5524, 5603, 560501-5606, 8301
		19														*0804
		19										29				*0809
		19												31		*0813, 0825, 7301
	18															*0817, 1561
	18															*0838
														31		*1301-130204, 1304, 1306- 1314, 1317, 1319, 1321- 1323, 1505, 1520, 1531, 1555, 1586, 9507, 2701- 2703, 270502-270510, 2707 2709, 2711-2714, 2716, 2717, 2719, 2723, 2726- 2739, 2741-2744, 350101- 350203, 350401-3505, 3507, 350901-3510, 3512, 3515-3517, 3519-352002, 3522, 3523, 3527-3534,
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **46F**

Lot-specific information

www.olerup.com

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3537, 3539-3542, 3546-3554, 3557, 3563-3565Q, 356801-3569, 3571, 3572, 3577, 3578, 3581, 3583, 3588-3594, 400101-4004, 40060101-4011, 4013-401403, 4018-4022N, 4024, 4027, 4029-4031, 4033-4040, 4042-4050, 4052-4060, 4062-4066, 4069, 4070, 407201-4094, 440301-440303, 4407, 4413, 4426, 4430-4432,																
4436-4440, 4443, 4445-4447, 4450, 4454, 4457, 4460, 4461N, 446401-4465, 4606, 4613, 47010101-4705, 510901-5110, 5131, 5140, 5142, 5203, 5210, 530101-530104, 5303, 5305, 5307, 5309, 5310, 5312-5315, 570101-570103, 570301-570302, 5706-5708, 5710, 5711, 5715-5718, 580101-5802, 5804, 5807, 5810N, 5811, 5813-5818, 7804																
*1303, 3503, 3506, 3513, 3536, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 4071, 4410, 4611, 5115, 5304, 5607, 5608, 5614, 5904																
*1315																
*1318											11					
*1401, 1407N		2			5											
*140201-1404, 1409		2			5											
*1405-140602		2			5											
*1408		2			5											
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **46F**

Lot-specific information

www.olerup.com

180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec.
			215		225					185						PCR product
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
														31		3537, 3539-3542, 3546-3554, 3557, 3563-3565Q, 356801-3569, 3571, 3572, 3577, 3578, 3581, 3583, 3588-3594, 400101-4004, 40060101-4011, 4013-401403, 4018-4022N, 4024, 4027, 4029-4031, 4033-4040, 4042-4050, 4052-4060, 4062-4066, 4069, 4070, 407201-4094, 440301-440303, 4407, 4413, 4426, 4430-4432,
														31		4436-4440, 4443, 4445-4447, 4450, 4454, 4457, 4460, 4461N, 446401-4465, 4606, 4613, 47010101-4705, 510901-5110, 5131, 5140, 5142, 5203, 5210, 530101-530104, 5303, 5305, 5307, 5309, 5310, 5312-5315, 570101-570103, 570301-570302, 5706-5708, 5710, 5711, 5715-5718, 580101-5802, 5804, 5807, 5810N, 5811, 5813-5818, 7804
										28				31		*1303, 3503, 3506, 3513, 3536, 3555, 3556, 3559, 3570, 3574, 3575, 3584, 4071, 4410, 4611, 5115, 5304, 5607, 5608, 5614, 5904
										27				31		*1315
																*1318
		19				23	24		26							*1401, 1407N
		19				23			26							*140201-1404, 1409
		19				23										*1405-140602
		19				23	24									*1408
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Lot No.: **46F**

Lot-specific information

www.olerup.com

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*1503, 1547, 1554, 1562, 1568, 1598, 9503, 9527, 9531, 9532, 370101- 370104, 3703N-3707, 3709- 3714, 4805, 4808, 4815, 4819			3			6										
*1509, 1510, 1518, 1523, 1537, 1551, 1572, 1580, 1590, 1593, 1599, 9508, 9515, 9519, 9534		2	3													
*1529, 1538, 3521, 5137, 5145, 5163, 5306			3													
*1542, 1583, 4101, 4105- 4107, 4508, 5121, 5136																
*1549, 1574			3													
*1552, 9514, 9524		2	3													
*1558, 1573											11					
*1564, 1813, 1815, 1819, 1821, 1828, 1830, 1831, 3708			3			6										
*1569	1		3			6				10		12				
*1591, 9523, 9551, 1812, 3702, 4012, 480101-4804, 4807, 4809-4814, 4817, 4818			3			6										
*9533		2	3													
*180101-1803, 1805, 1806, 1808-1811, 1814, 1817N, 1818, 1820, 1822-1827, 1832, 4816			3			6										
*1804, 1807, 1829, 3524, 3525, 5302, 5714, 5809, 5812			3													
*3526					5			8								
*3535										10		12				
*3538																
*3560, 4618, 5412, 5518, 5534, 5901-5903																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **46F**

Lot-specific information

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180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec.
			215		225					185						PCR product
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
	18															*1503, 1547, 1554, 1562, 1568, 1598, 9503, 9527, 9531, 9532, 370101- 370104, 3703N-3707, 3709- 3714, 4805, 4808, 4815, 4819
																*1509, 1510, 1518, 1523, 1537, 1551, 1572, 1580, 1590, 1593, 1599, 9508, 9515, 9519, 9534
																*1529, 1538, 3521, 5137, 5145, 5163, 5306
												29				*1542, 1583, 4101, 4105- 4107, 4508, 5121, 5136
	18															*1549, 1574
														31		*1552, 9514, 9524
											28					*1558, 1573
																*1564, 1813, 1815, 1819, 1821, 1828, 1830, 1831, 3708
	18		20	21									30			*1569
	18													31		*1591, 9523, 9551, 1812, 3702, 4012, 480101-4804, 4807, 4809-4814, 4817, 4818
											28					*9533
														31		*180101-1803, 1805, 1806, 1808-1811, 1814, 1817N, 1818, 1820, 1822-1827, 1832, 4816
														31		*1804, 1807, 1829, 3524, 3525, 5302, 5714, 5809, 5812
														31		*3526
															32	*3535
											28					*3538
												29		31		*3560, 4618, 5412, 5518, 5534, 5901-5903
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*3576, 4061, 5409, 5504, 5508, 5522, 5609, 5610, 5612, 5615, 5618, 8101, 8103, 8104N														14		
*3582										10						
*3585										10						
*380101-380202, 3809, 3811, 3812, 3815, 3817	1	2	3													
*3803	1					6										
*3804	1	2	3													
*3805	1	2	3													
*3806	1		3													
*3807	1		3													
*3808	w	2	3													
*3810		2	3													
*3813, 3814	1	2														
*3816	1															
*4025, 4068																
*4204														14		
*4429																
*4806			3													
*511301-511302, 5162, 5214																
*5119																
*5122, 7803										10						
*5401, 5402, 5404, 5405N, 5407, 5408N, 5411, 5413- 5417, 550201-550202, 5507, 5510, 5512, 5513, 5516, 5519, 5523, 5526, 5527, 5530, 5532, 5623														14		
*5403, 5601, 5602, 5604, 5611, 5616, 5617, 5620, 5622, 5624															14	
*5410, 5521											11			14		
*550101-550104, 550203, 5503, 5505, 5511, 5515, 5517, 5520, 5525, 5528, 5529, 5531, 5533															14	
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Lot No.: **46F**

Lot-specific information

www.olerup.com

180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec.
			215		225					185						PCR product
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
														31		*3576, 4061, 5409, 5504, 5508, 5522, 5609, 5610, 5612, 5615, 5618, 8101, 8103, 8104N
														31		*3582
										28				31		*3585
		19		21			24									*380101-380202, 3809, 3811, 3812, 3815, 3817
	18			21			24									*3803
	18			21												*3804
		19		21												*3805
		19		21												*3806
		19		21			24									*3807
		19		w			24									*3808
		19					24									*3810
		19		21			24									*3813, 3814
		19		21			24									*3816
		?												31		*4025, 4068
		19										29				*4204
															32	*4429
		19												31		*4806
										27	28					*511301-511302, 5162, 5214
										27						*5119
																*5122, 7803
												29		31		*5401, 5402, 5404, 5405N, 5407, 5408N, 5411, 5413-5417, 550201-550202, 5507, 5510, 5512, 5513, 5516, 5519, 5523, 5526, 5527, 5530, 5532, 5623
											28			31		*5403, 5601, 5602, 5604, 5611, 5616, 5617, 5620, 5622, 5624
												29				*5410, 5521
												29				*550101-550104, 550203, 5503, 5505, 5511, 5515, 5517, 5520, 5525, 5528, 5529, 5531, 5533
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

Length of spec.	230	170	200	145	105	170	165	180	230	105	160	175	85	80	190	165
PCR product							220	390		165						220
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
*5509											11					14
*5613, 8201, 8202																14
*5619N											11					14
*5820, 6702	1															
*670101	1				5											14
HLA-B allele ⁴																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cw*1515																
Well No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

¹The internal positive control primer pairs amplify segments of the human growth hormone gene. The two different control primer pairs give rise to either an internal positive control band of 1070 base pairs, for most wells, or a band of 800 base pairs, for some wells.

Well number 1 contains the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to help in the correct orientation of the HLA-B*39 subtyping.

In addition, wells number 3, 5, 6, 9, 10, 12, 13, 15 to 18, 20 to 23, 26, 27, 29 to 32 contain the primer pair giving rise to the shorter, 800 bp, internal positive control band in order to allow kit identification.

In the presence of a specific amplification the intensity of the control band often decreases.

²The nucleotide position, in the 1st, 2nd or 3rd exon or 5' untranslated region matching the specificity-determining 3'-end of the primer is given. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

³The nucleotide position, in the 1st, 2nd or 3rd exon or 3rd intron matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

⁴The nucleotide sequence of the B*390102 allele has been shown to be identical B*390101. The nucleotide sequence of the B*3921 allele has been shown to be identical B*3924.

180	160	385	100	220	150	85	185	230	265	80	180	245	60	150	230	Length of spec.
			215		225					185						PCR product
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
											28					*5509
											28			31		*5613, 8201, 8202
											28					*5619N
				21												*5820, 6702
		19		21		23	24									*670101
HLA-B allele ⁴																
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.
											28					Cw*1515
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Well No.

⁵Primer solution 7: Specific PCR fragment of 165 bp in the B*3917 allele. Specific PCR fragment of 220 bp in the B*3903, B*3914, B*3924, B*3929 and B*3937 alleles.

Primer solution 8: Specific PCR fragment of 180 bp in the B*3904 and in the B*3526 alleles. Specific PCR fragment of 390 bp in the B*3946 allele.

Primer solution 10: Specific PCR fragment of 105 bp in the B*391901-391902 and in the B*3582, B*3585, B*5122 and B*7803 alleles. Specific PCR fragment of 165 bp in the B*3907 and in the B*1569 and B*3535, alleles.

Primer solution 16: Specific PCR fragment of 165 bp in the B*3914 and B*3929 alleles. Specific PCR fragment of 220 bp in the B*3909 and B*3916 alleles.

Primer solution 20: Specific PCR fragment of 100 bp in the B*390105, B*3918 and B*3927 and in the B*1569 alleles. Specific PCR fragment of 215 bp in the B*3909 allele.

Primer solution 22: Specific PCR fragment of 150 bp in the B*3945 allele. Specific PCR fragment of 225 bp in the B*3928 allele.

Primer mix 27: Specific PCR fragment of 80 bp in the B*3932 and B*5119 alleles. Specific PCR fragment of 185 bp in the B*3938Q and B*1315, B*511301-511302, B*5162 and B*5214 alleles.

⁶The B*3910 and B*670102 alleles will give rise to identical amplification patterns with the HLA-B*39 subtyping kit. These two alleles can be distinguished by the HLA-B low resolution and/or HLA-B*67 kits.

'w', might be weakly amplified.

'?', nucleotide sequence information not available for the primer matching sequence.

				Well																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
				Prod. No.:	200511201	200511202	200854903	200511204	200854905	200625106	200511207	200854908	200511209	200625110	200854911	200740112	200854913	200511214	200511215	200854916	
IHC cell line		B*																			
1	9001	SA	*0702	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
2	9280	LK707	*5201	*7301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	9011	E4181324	*52011		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275	GU373	*1510	*5301	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9009	KAS011	*3701		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
6	9353	SM	*3901	*5101	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
7	9020	QBL	*1801		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
8	9007	DEM	*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9026	YAR	*3801		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	9107	LKT3	*5401		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
11	9051	PITOUT	*440301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9052	DBB	*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	9004	JESTHOM	*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	9071	OLGA	*1501	*1520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	9075	DKB	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	9037	SWEIG007	*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	9282	CTM3953540	*0801	*5501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
18	9257	32367	*1401	*5601	-	+	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-
19	9038	BM16	*1801		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
20	9059	SLE005	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	9064	AMALA	*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056	KOSE	*3503		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	9124	IHL	*4002	*5602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
24	9035	JBUSH	*3801		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	9049	IBW9	*1402		-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
26	9285	WT49	*5801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	9191	CH1007	*0705	*5101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
28	9320	BEL5GB	*4402	*4403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	9050	MOU	*440301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	9021	RSH	*4201		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
31	9019	DUCAF	*1801		-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-
32	9297	HAG	*4102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098	MT14B	*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	9104	DHIF	*3801		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	9302	SSTO	*4402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024	KT17	*1501	*3501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	9065	HHKB	*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
38	9099	LZL	*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315	CML	*0801	*2705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	9134	WHONP199	*1302	*4601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	9055	H0301	*1402		-	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
42	9066	TAB089	*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076	T7526	*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057	TEM	*3801		+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	9239	SHJO	*4201	*5001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
46	9013	SCHU	*0702		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
47	9045	TUBO	*5101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303	TER-ND	*3501	*4403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CELL LINE VALIDATION SHEET																					
HLA-B*39 SSP subtyping kit																					
				Prod. No.:	Well																
					17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
					200740117	200511218	200625119	200854920	200740121	200854922	200854923	200511224	200511225	200511226	200625127	200625128	200511229	200854930	200511231	200854932	
	IHWC cell line		B*																		
1	9001 SA		*0702		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	9280 LK707		*5201	*7301	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-
3	9011 E4181324		*52011		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	9275 GU373		*1510	*5301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
5	9009 KAS011		*3701		-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	9353 SM		*3901	*5101	-	-	+	-	+	-	+	+	-	-	-	-	-	-	-	-	-
7	9020 QBL		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
8	9007 DEM		*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
9	9026 YAR		*3801		-	-	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-
10	9107 LKT3		*5401		-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-
11	9051 PITOUT		*440301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
12	9052 DBB		*5701		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
13	9004 JESTHOM		*2705		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
14	9071 OLGA		*1501	*1520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
15	9075 DKB		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
16	9037 SWEIG007		*4002		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
17	9282 CTM3953540		*0801	*5501	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-	-
18	9257 32367		*1401	*5601	-	-	+	-	-	-	+	+	-	+	-	+	-	-	+	-	-
19	9038 BM16		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
20	9059 SLE005		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
21	9064 AMALA		*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	9056 KOSE		*3503		-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-
23	9124 IHL		*4002	*5602	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-
24	9035 JBUSH		*3801		-	-	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-
25	9049 IBW9		*1402		-	-	+	-	-	-	+	-	-	+	-	-	-	-	-	-	-
26	9285 WT49		*5801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
27	9191 CH1007		*0705	*5101	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	9320 BEL5GB		*4402	*4403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
29	9050 MOU		*440301		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
30	9021 RSH		*4201		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	9019 DUCAF		*1801		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
32	9297 HAG		*4102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	9098 MT14B		*4001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
34	9104 DHIF		*3801		-	-	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-
35	9302 SSTO		*4402		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	9024 KT17		*1501	*3501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
37	9065 HHKB		*0702		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	9099 LZL		*1501		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	9315 CML		*0801	*2705	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-
40	9134 WHONP199		*1302	*4601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
41	9055 H0301		*1402		-	-	+	-	-	-	+	-	-	+	-	-	-	-	-	-	-
42	9066 TAB089		*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	9076 T7526		*4601		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	9057 TEM		*3801		-	-	+	-	+	-	-	+	-	-	-	-	-	-	-	-	-
45	9239 SHJO		*4201	*5001	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	9013 SCHU		*0702		-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	9045 TUBO		*5101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	9303 TER-ND		*3501	*4403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-

CERTIFICATE OF ANALYSIS**Olerup SSP® HLA-B*39 SSP****Product number:** 101.566-12/04 – including Taq pol.**Lot number:** 46F**Expiry date:** 2011-February-01**Number of tests:** 12 tests – Product No. 101.566-12

4 tests – Product No. 101.566-04

Number of wells per test: 32**Well specifications:**

Well No.	Production No.	Well No.	Production No.	Well No.	Production No.
1	2005-112-01	13	2008-549-13	25	2005-112-25
2	2005-112-02	14	2005-112-14	26	2005-112-26
3	2008-549-03	15	2005-112-15	27	2006-251-27
4	2005-112-04	16	2008-549-16	28	2006-251-28
5	2008-549-05	17	2005-112-17	29	2005-112-29
6	2006-251-06	18	2005-112-18	30	2008-549-30
7	2005-112-07	19	2006-251-19	31	2005-112-31
8	2008-549-08	20	2008-549-20	32	2008-549-32
9	2005-112-09	21	2007-401-21		
10	2006-251-10	22	2008-549-22		
11	2008-549-11	23	2008-549-23		
12	2007-401-12	24	2005-112-24		

The specificity of each primer solution of the kit has been tested against 48 well characterized IHWC cell line DNAs.

No DNAs carrying the alleles to be amplified by primer solutions 4, 7, 10, 13, 15, 22, 25, 27, 30 and 32 were available. The specificities of the primers in primer solutions 3, 7, 10, 15 and 30 were tested by separately adding one or two additional 5'-primers, respectively one or two additional 3'-primers. In primer solution 4 it was only possible to test the 5'-primer, the 3'-primer was not possible to test. In primer solution 25 it was only possible to test the 3'-primer, the 5'-primer was not possible to test. Additional primers in primer solutions 3, 8, 16 and 20 were tested by separately adding either 5' or 3'-primers.

Results: No false positive or false negative amplifications were obtained.

Date of approval: 2009-May-27

Approved by:

Quality Control, Supervisor

Lot No.: **46F**

Lot-specific information

www.olerup.com

Declaration of Conformity

Product name: *Olerup* SSP® HLA-B*39**Product number:** 101.566-12/04**Lot number:** 46F**Intended use:** HLA-B*39 histocompatibility testing**Manufacturer:** *Olerup* SSP AB
Hasselstigen 1
SE-133 33 Saltsjöbaden, Sweden
Phone: +46-8-717 88 27
Fax: +46-8-717 88 18

We, *Olerup* SSP AB, hereby declare that this product, to which this Declaration of Conformity relates is in conformity with the following Standard(s) and other normative document(s) ISO 9001:2000 and ISO 13485:2003, following the provisions of the 98/79/EC Directive on *in vitro* diagnostic medical devices, Annex II List B, conformity assessed using Annex IV, as transposed into the national laws of the Member States of the European Union.

The Technical Documentation File is maintained at *Olerup* SSP AB, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.

The Authorized Representative located within the Community is: *Olerup* SSP AB.

Notified Body: Lloyd's Register Quality Assurance Limited, Hiramford, Middlemarch Office Village, Siskin Drive, Coventry CV3 4FJ, United Kingdom. (Notified Body number: 0088.)

Saltsjöbaden, Sweden
2009-May-27

Olle Olerup
Managing Director

Lot No.: **46F**

Lot-specific information

www.olerup.com**ADDRESSES:****Manufacturer:****Olerup SSP AB**, Hasselstigen 1, SE-133 33 Saltsjöbaden, Sweden.**Tel:** +46-8-717 88 27**Fax:** +46-8-717 88 18**E-mail:** info-ssp@olerup.com**Web page:** <http://www.olerup.com>**Distributed by:****Olerup GmbH**, Löwengasse 47 / 6, AT-1030 Vienna, Austria.**Tel:** +43-1-710 15 00**Fax:** +43-1-710 15 00 10**E-mail:** support-at@olerup.com**Web page:** <http://www.olerup.com>**Olerup Inc.**, 901 S. Bolmar St., Suite R, West Chester, PA 19382**Tel:** 1-877-OLERUP1**Fax:** 610-344-7989**E-mail:** info.us@olerup.com**Web page:** <http://www.olerup.com>For information on *Olerup* SSP distributors worldwide, contact **Olerup GmbH**.