101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Lot No.: 86Y **Lot-specific information**

Olerup SSP® DQA1*02,05;DQB1*02,03:02

Product number:	**101.903-24 – including *Taq* polymerase** **101.903-24u – without *Taq* polymerase**
Lot number:	**86Y**
Expiry date:	**2018-February-01**
Number of tests:	**24**
Number of wells per test:	**17 + 1**
Storage - pre-aliquoted primers:	**dark at -20ºC**
- PCR Master Mix:	**-20ºC**
- Adhesive PCR seals	**RT**
- Product Insert	**RT**

This Product Description is only valid for Lot No. 86Y.

Complete product documentation consists of generic Instructions for Use (IFU), lot specific Product Insert, Worksheet and Certificate.

CHANGES COMPARED TO THE PREVIOUS *OLERUP* SSP® DQA1*02,05;DQB1*02,03:02 LOT (07Y)

The DQA1*02,05;DQB1*02,03:02 kit has been redesigned and improved with regards to allelic detection and discrimination and facilitated interpretation. The kit resolution focuses on common and well documented (CWD) alleles[1].

The kit contains 17 primer mixes for the DQA1 and DQB1 alleles and includes a negative control.

The format of the Product Insert and Worksheet have been changed.

The specificity and interpretation tables have been updated for the DQA1 and DQB1 alleles described since the previous *Olerup* SSP® DQA1*02,05;DQB1*02,03:02 lot **(Lot No. 07Y)** was made. The kit design is based on IMGT/HLA database 3.20.0.

As of lot series V, the Specificity Table is included in the lot-specific Product Insert, and the Interpretation Table is included in the Worksheet.

The DQA1*02,05;DQB1*02,03:02 resolution primer set is unchanged compared to the previous lot.

[1]S. J. Mack1, P. Cano2, J. A. Hollenbach1 et al.
Common and well-documented HLA alleles: 2012 update to the CWD catalogue. Tissue Antigens, 2013, 81, 194–203

Change in revision R01 compared to R00:
1. The Cell Line Validation Sheet has been corrected for primer mix 6.

Lot No.: 86Y **Lot-specific information**

Well **18** contains Negative Control primer pairs, that will amplify more than 95% of the *Olerup* SSP® HLA Class I, DRB, DQB1, DPB1 and DQA1 amplicons as well as all the amplicons generated by the control primer pairs matching the human growth hormone gene.

HLA-specific PCR product sizes range from 75 to 200 base pairs.
The PCR product generated by the positive control primer pair is 430 base pairs.

Length of PCR product	**105**	**200**	**105**	**80**	**75**	**80**	**85**
5'-primer[1]	**164**	**340**	**440**	**45**	**45**	**43**	**36**
	5'-CAC3'	**5'-Agg3'**	**5'-TTA3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-Tgg3'**	**5'-TAC3'**
							36
							5'-TAT3'
3'-primer[2]	**231**	**2nd I**	**507**	**59**	**58**	**57**	**47**
	5'-TgC3'	**5'-AAA3'**	**5'-TTg3'**	**5'-CTC3'**	**5'-ggC3'**	**5'-CTC3'**	**5'-ACA3'**
							48
							5'-gCA3'
							48
							5'-gCC3'
							52
							5'-TgT3'
A*	**+**	**+**	**+**				
B*	**+**	**+**	**+**				
C*	**+**	**+**	**+**				
DRB1				**+**	**+**		
DRB3				**+**	**+**		
DRB5				**+**			
DQB1					**+**		
DPB1						**+**	
DQA1							**+**

[1]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon, matching the specificity-determining 3'-end of the primer is given. Nucleotide and codonnumbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.
[2]The nucleotide position for HLA class I genes and the codon for HLA class II genes, in the 2nd or 3rd exon or the 2nd intron, matching the specificity-determining 3'-end of the primer is given in the anti-sense direction. Nucleotide and codon numbering as on the www.ebi.ac.uk/imgt/hla web site. The sequence of the 3 terminal nucleotides of the primer is given.

101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Lot No.: 86Y **Lot-specific information**

PRODUCT DESCRIPTION

DQA1*02,05;DQB1*02,03:02 SSP subtyping

CONTENT

The primer set contains 5'- and 3'-primers for identifying the following on CWD level:
DQA1*05:01 DQB1*02:01 (DQ2)
DQA1*05:05 DQB1*03:01 / DQA1*02:01 **DQB1*02:02** (DQ2)
DQA1*03 DQB1*03:02 (DQ8)
DQA1*05 DQB1*02 / DQA1*03 DQB1*03:02 (DQ2 + DQ8)
DQA1*05:01 X
DQA1*05:05 X
DQB1*02:01 X
DQB1*02:02 X
DQB1*03:02 X

α and β chains associated with the disease in bold[1,2,3].
X = other allele.

Please note that DQB1 amplifications usually are somewhat less pronounced than e.g. DRB and DQA1 amplifications even when using the same DNA preparation and exactly the same experimental procedures.

[1]Catassi C, Kryszak D, Louis-Jacques O, et al.
Detection of Celiac disease in primary care: a multicenter case-finding study in North America.
Am J Gastroenterol. 2007 Jul;102(7):1454-60. Epub 2007 Mar 13.

[2]Megiorni F, Mora B, Bonamico M, Barbato M, Nenna R, Maiella G, Lulli P, Mazzilli MC.
HLA-DQ and risk gradient for celiac disease.
Hum Immunol. 2009 Jan;70(1):55-9

[3]Karell K, Louka AS, Moodie SJ, et al. HLA types in celiac disease patientsnot carrying the DQA1*05-DQB1*02 (DQ2) heterodimer: results from the European Genetics Cluster on Celiac Disease.
Hum Immunol. 2003 Apr;64(4):469-77

PLATE LAYOUT

Each test consists of 18 PCR reactions in a 24 well PCR plate. Wells 19 to 24 are empty.

1	2	3	4	5	6	7	8
DQA1	DQA1	DQA1	DQA1	DQA1	DQA1	DQA1	DQB1
9	10	11	12	13	14	15	16
DQB1	DQB1	DQB1	DQB1	DQB1	DQB1	DQB1	DQB1
17	18	empty	empty	empty	empty	empty	empty
DQB1	NC						

The 24 well cut PCR plate is marked with '86Y' in silver/gray ink.
Well No. 1 is marked with the Lot No '86Y'.
Wells 1 to 7 – DQA1 high resolution primers.
Wells 8 to 17 – DQB1 resolution primers.
Well 18 – Negative Control (NC).
A faint row of numbers is seen between wells 1 and 2 or wells 7 and 8 of the PCR trays. These stem from the manufacture of the trays, and should be disregarded.

The PCR plates are covered with a PCR-compatible foil.
Please note: When removing each 24 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.

UNIQUELY IDENTIFIED ALLELES

DQA1 and DQB1 alleles recognized by the HLA Nomenclature Committee in April 2015[1,2] have been considered in the specificity and interpretation tables of the DQA1*02,05;DQB1*02,03:02 kit.
For further details see Content section.

The DQA1*02,05;DQB1*02,03:02 subtyping kit cannot distinguish the silent mutations in the DQA1*05:01:01:01-05:01:02 and 05:05:01:01-05:05:01:03 alleles, the DQB1*02:01:01-02:01:06, 02:01:08-02:01:20 and 02:01:22-02:01:23, the DQB1*03:02:01-03:02:09, 03:02:12-03:02:13 and 03:02:15-03:02:19 or the DQB1*03:02:10 and 03:02:14 alleles.

[1]DQA1 and DQB1 alleles listed on the IMGT/HLA web page 2015-April-17, release 3.20.0, www.ebi.ac.uk/imgt/hla.
[2]Alleles that have been deleted from or renamed in the official WHO HLA Nomenclature up to and including the last IMGT/HLA database release can be retrieved from web page http://hla.alleles.org/alleles/deleted.html.

EXPECTED RESULTS

Table 1 describes expected results for the (groups of) alleles that the kit is able to detect and separate.

Table 1: Expected results for targeted DQA1 and DQB1 alleles.

DQA1 alleles	DQB1 alleles	Positive DQA1 wells	Positive DQB1 wells
05:01	02:01 (DQ2)	3, 5	8, 10, 12
(02:01) 05:05	02:02 (DQ2) *(03:01)*	1 3, 5, 6	8, 9, 12 10, 15, 17
03	03:02 (DQ8)	2	10, 12, 13, 15
05:01		3, 5	
05:05		3, 5, 6	
02:01		1	
03		2	
	02:01		8, 10, 12
	02:02		8, 9, 12
	03:01		10, 15, 17
	03:02		10, 12, 13, 15

The negative control DNA must only give rise to the internal control bands of 430 or 515 base pairs respectively and no DQA1*02,05;DQB1*02,03:02 specific bands. Additional bands might indicate inappropriate test conditions or contamination.

101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Lot No.: 86Y **Lot-specific information**

SPECIFICITY TABLE

DQA1*02,05;DQB1*02,03:02 SSP subtyping

Specificities and sizes of the PCR products of the 17+1 primer mixes used for DQA1*02,05;DQB1*02,03:02 SSP typing

Primer Mix	Size of spec. PCR product[1]	Size of control band[2]	Amplified DQA1 alleles[3]	Amplified DQB1 alleles[3]
1	175 bp	**430 bp**	*02:01	
2	185 bp	515 bp	*03:01:01, 03:01:03-03:03:02	
3	165 bp	515 bp	*05:01:01:01-05:09, 05:11	
4[4]	90 bp, 200 bp	515 bp	*05:02-05:03, 05:04?, 05:06-05:07	
5	205 bp	515 bp	*05:01:01:01-05:03, 05:05:01:01-05:09, 05:11	
6[4]	100 bp	515 bp	*05:02?, 05:04?, 05:05:01:01-05:05:01:03, 05:08-05:09, 05:10?, 05:11	
7[4,7]	80 bp	515 bp	*05:09	
8	210 bp	515 bp		*02:01:01-02:39, 02:41-02:58N
9	140 bp	515 bp		*02:02:01-02:03, 02:06, 02:10-02:12
10[6]	145 bp	515 bp		*02:01:01-02:01:23, 02:04-02:05, 02:07:01-02:09, 02:13-02:47, 02:49-02:58N, 03:01:01:01-03:23, 03:25-03:78, 03:80-03:96, 03:98-03:163, 03:166-03:167, 03:169-03:180, 04:01:01-04:29, 05:01:01:01-05:02:10, 05:02:13-05:13, 05:15-05:83, 05:85-05:92, 06:01:01-06:37, 06:39-06:85, 06:87-06:101, 06:105-06:175
11	135 bp	515 bp		*02:03, 03:03:02:01-03:03:13, 03:06, 03:12, 03:15, 03:20, 03:25-03:26, 03:30-03:31, 03:33-03:34, 03:38-03:41, 03:43, 03:65, 03:74, 03:79, 03:86-03:91Q, 03:95N-03:99Q, 03:104-03:105, 03:111-03:113, 03:117, 03:123-03:124, 03:126, 03:136-03:137, 03:141, 03:145, 03:149, 03:155-03:156, 03:176-03:177, 04:03:01-04:03:02, 06:03:10, 06:51:01, 06:66, 06:96, 06:168, 06:172
12	135 bp	515 bp		*02:01:01-02:01:06, 02:01:08-02:01:20, 02:01:22-02:02:02, 02:04-02:16, 02:18N-02:36, 02:38-02:58N, 03:02:01-03:02:09, 03:02:11-03:02:13, 03:02:15-03:02:19, 03:07-03:08, 03:11, 03:18, 03:32, 03:37, 03:45, 03:62-03:64, 03:66N-03:68, 03:70,

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Lot No.: 86Y **Lot-specific information**

			03:81, 03:85, 03:106-03:107, 03:125, 03:146, 03:153, 03:161, 03:174-03:175, 03:178-03:179, 06:29, 06:63, 06:123, 06:139
13[4]	105 bp	**430 bp**	*03:02:01-03:02:10, 03:02:12-03:03:04, 03:03:06-03:03:13, 03:06, 03:08, 03:11-03:12, 03:15, 03:18, 03:20, 03:25-03:26, 03:30-03:34, 03:37-03:41, 03:43, 03:45, 03:62-03:63, 03:65-03:68, 03:70, 03:79, 03:81, 03:85-03:89, 03:91Q, 03:95N-03:99Q, 03:104-03:107, 03:110, 03:112, 03:117, 03:123-03:126, 03:136-03:137, 03:145-03:146, 03:149, 03:155-03:156, 03:174-03:179, 04:03:01-04:03:02, 06:02:05, 06:03:10, 06:04:07, 06:19:01-06:19:02, 06:63, 06:87, 06:139, 06:168
14	135 bp, 170 bp	515 bp	*03:04:01-03:04:02, 03:09, 03:11, 03:14:01-03:14:02, 03:80, 03:138
15[5]	145 bp, 185 bp	515 bp	*03:01:01:01-03:103, 03:106-03:108, 03:110-03:153, 03:155-03:167, 03:169-03:180, 04:01:03, 04:09
16[8]	175 bp	**430 bp**	*03:06[?]-03:08[?], 03:10:02[?]-03:15[?], 03:17:01[?]-03:18[?], 03:19, 03:20[?], 03:23[?], 03:26[?], 03:37[?], 03:40[?], 03:48[?], 03:52[?]-03:71[?], 03:74[?]-03:78[?], 03:81[?]-03:82[?], 03:101[?]-03:112[?], 03:118N[?]-03:163[?], 03:165[?]-03:167[?], 03:170[?]-03:179[?]
17	220 bp	515 bp	*03:01:01:01-03:01:07, 03:01:09-03:01:29, 03:04:01-03:04:02, 03:09-03:10:02, 03:13-03:14:02, 03:16, 03:19, 03:21-03:22, 03:24, 03:27-03:29, 03:35-03:36, 03:42, 03:44, 03:46-03:60, 03:69, 03:71, 03:73, 03:75-03:77, 03:80, 03:82-03:84N, 03:92-03:94, 03:101-03:103, 03:108, 03:114-03:116, 03:118N-03:122, 03:127-03:131, 03:133-03:135, 03:138-03:140, 03:142-03:144, 03:147-03:148, 03:150, 03:152, 03:157-03:160, 03:162-03:167, 03:169-03:173, 03:180
18[9]		**Negative control**	

[1]Alleles 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 DQA1 and DQB1 SSP typings.
When the primers in a primer mix can give rise to HLA-specific PCR products of more than one length this is indicated if the size difference is more than 20 base pairs. Size differences of 20 base pairs or less are not given. For high resolution SSP kits, the alleles listed are specified according to amplicon length.
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 bands may sometimes be observed. Such bands should be disregarded and do not influence the interpretation of the SSP typings.
PCR fragments migrating faster than the control bands, but slower than a 400 bp fragment may be seen in some gel read-outs. Such bands can be disregarded and do not influence the interpretation of the SSP typings.

101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Some primers may give rise to primer oligomer artifacts. Sometimes this phenomenon is an inherit feature of the primer pair(s) of a primer mix. More often it is due to other factors such as too low amount of DNA in the PCR reactions, taking too long time in setting up the PCR reactions, working at elevated room temperature or using thermal cyclers that are not pre-heated.

[2]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 430 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[3]For several DQA1 and DQB1 alleles 1st and/or 3rd exon(s) and beyond, as well as intron 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. Assumption is made that unknown sequences in these regions are conserved within allelic groups.

[4]HLA-specific PCR products shorter than 125 base pairs have a lower intensity and are less sharp than longer PCR products.

[5]The primer pair in well 15 will in some samples give rise to two HLA-specific PCR fragments and may give rise to a lower yield for the DQB1*03xx alleles.

[6]Primer mix 10 may have tendencies of unspecific amplification.

[7]Primer mix 7 may give rise to a lower yield of HLA-specific PCR product than the other DQA1*02,05;DQB1*02,03:02 primer mixes.

[8]In primer mix 16 the positive control band may be weaker than for other DQA1*02,05;DQB1*02,03:02 primer mixes.

[9]Primer mix 18 contains a negative control, which will amplify more than 95% of HLA amplicons as well as the amplicons generated by the control primer pairs matching the human growth hormone gene. HLA-specific PCR product sizes range from 75 to 200 base pairs and the PCR product generated by the HGH positive control primer pair is 430 base pairs.

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

101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Lot No.: 86Y **Lot-specific information**

DQA1 PRIMER SPECIFICATION

Well No.	1	2	3	4	5	6	7
Length of spec.	175	185	165	90	205	100	80
PCR product				200			
Length of int. pos. control[1]	430	515	515	515	515	515	515
5'-primer(s)[2]	7(90)	7(90)	33(169)	59(245)	21(131)	-13(31)	-13(31)
	5' -CAC 3'	5' -CAT 3'	5' -AgC 3'	5' -CCg 3'	5' -TCC 3'	5' -ggA 3'	5' -ggA 3'
				107(389)			
				5' -CAT 3'			
3'-primer(s)[3]	52(224)	54(232)	75(293)	75(293)	75(293)	1st I	0(70)
	5' -TgT 3'	5' -TCT 3'	5' -gAC 3'	5' -gAC 3'	5' -gAC 3'	5' -TgC 3'	5' -TTT 3'
				159(547)			
				5' -AgA 3'			
Well No.	1	2	3	4	5	6	7

DQB1 PRIMER SPECIFICATION

Well No.	8	9	10	11	12	13	14	15	16	17
Length of spec.	210	140	145	135	135	105	135	145	175	220
PCR product							170	185		
Length of int. pos. control[1]	515	515	515	515	515	430	515	515	430	515
5'-primer(s)[2]	29(184)	101(400)	135(500)	26(173)	26(173)	26(173)	13(136)	38(210)	140(516)	26(173)
	5' -gAg 3'	5' -TCT 3'	5' -TgA 3'	5' -TCT 3'	5' -TCT 3'	5' -TCT 3'	5' -gCC 3'	5' -gCA 3'	5' -ACC 3'	5' -TTA 3'
	30(185)						26(173)	48(240)		
	5' -AAg 3'						5' -TTA 3'	5' -CgC 3'		
							135(500)	55(260)		
							5' -TgA 3'	5' -gCC 3'		
								55(260)		
								5' -gCA 3'		
3'-primer(s)[3]	86(353)	135(500)	169(604)	57(266)	57(266)	47(237)	57(266)	86(353)	185(650)	86(353)
	5' -gCT 3'	5' -ggC 3'	5' -gAC 3'	5' -CgT 3'	5' -Cgg 3'	5' -CgA 3'	5' -Cgg 3'	5' -gCT 3'	5' -CgA 3'	5' -gCT 3'
						48(240)	167(596)	86(353)		
						5' -gCg 3'	5' -CAT 3'	5' -gTT 3'		
Well No.	8	9	10	11	12	13	14	15	16	17

[1]The internal positive control primer pairs amplify segments of the human growth hormone gene. The internal positive control bands are 430 or 515 base pairs respectively, well distribution as outlined in the table. Well number 1 contains the shorter, 430 bp, internal positive control band. The well distribution of the internal controls can help in orientation of the kit on gel photo, as well as allow for kit identification. In the presence of a specific amplification the intensity of the control band often decreases.

[2]The nucleotide position 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.

[3]The nucleotide position 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.

CE

For *In Vitro* Diagnostic Use.

101.903-24 – including *Taq* polymerase, IFU-01
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CELL LINE VALIDATION SHEET

DQA1*02,05;DQB1*02,03:02 typing kit[2]

					Well						
					1	2	3	4	5	6	7
				Prod. No.:	201549001	201549002	201549003	201549004	201549006	201549007	201549008
	IHWC cell line[1]		DQA1*								
1	9001	SA	*01:01		-	-	-	-	-	-	-
2	9280	LK707	*01:03	*03:03	-	+	-	-	-	-	-
3	9011	E4181324	*01:03		-	-	-	-	-	-	-
4	9275	GU373	*05:01		-	-	+	-	+	-	-
5	9009	KAS011	*01:02		-	-	-	-	-	-	-
6	9353	SM	*01:03	*03:01	-	+	-	-	-	-	-
7	9020	QBL	*05:01		-	-	+	-	+	-	-
8	9025	DEU	*03		-	+	-	-	-	-	-
9	9026	YAR	*03:01		-	+	-	-	-	-	-
10	9107	LKT3	*03:03		-	+	-	-	-	-	-
11	9051	PITOUT	*02:01		+	-	-	-	-	-	-
12	9052	DBB	*02:01		+	-	-	-	-	-	-
13	9004	JESTHOM	*01:01		-	-	-	-	-	-	-
14	9071	OLGA	*04:01		-	-	-	-	-	-	-
15	9075	DKB	*03:02		-	+	-	-	-	-	-
16	9037	SWEIG007	*05:05		-	-	+	-	+	+	-
17	9282	CTM3953540	*01:03	*05:01	-	-	+	-	+	-	-
18	9257	32367	*01:02	*03:03	-	+	-	-	-	-	-
19	9038	BM16	*05:05		-	-	+	-	+	+	-
20	9059	SLE005	*01:02		-	-	-	-	-	-	-
21	9064	AMALA	*05:03		-	-	+	+	-	-	-
22	9056	KOSE	*01:02	*01:04	-	-	-	-	-	-	-
23	9124	IHL	*01:03	*01:04	-	-	-	-	-	-	-
24	9035	JBUSH	*05:05		-	-	+	-	+	+	-
25	9049	IBW9	*02:01		+	-	-	-	-	-	-
26	9285	WT49	*05:01		-	-	+	-	+	-	-
27	9191	CH1007	*03:03	*01:05	-	+	-	-	-	-	-
28	9320	BEL5GB	*02:01	*03:03	+	+	-	-	-	-	-
29	9050	MOU	*02:01		+	-	-	-	-	-	-
30	9021	RSH	*04:01		-	-	-	-	-	-	-
31	9019	DUCAF	*05:01		-	-	+	-	+	-	-
32	9297	HAG	*05:05		-	-	+	-	+	-	-
33	9098	MT14B	*03:01		-	+	-	-	-	-	-
34	9104	DHIF	*05:05		-	-	+	-	+	+	-
35	9302	SSTO	*03:01		-	+	-	-	-	-	-
36	9024	KT17	*03:01		-	+	-	-	-	-	-
37	9065	HHKB	*01:03		-	-	-	-	-	-	-
38	9099	LZL	*05:03		-	-	+	+	-	-	-
39	9315	CML	*03:03	*05:01	-	+	+	-	+	-	-
40	9134	WHONP199	*02:01	*03:02	+	+	-	-	-	-	-
41	9055	H0301	*01:02		-	-	-	-	-	-	-
42	9066	TAB089	*01:03		-	-	-	-	-	-	-
43	9076	T7526	*03:02		-	+	-	-	-	-	-
44	9057	TEM	*01:04		-	-	-	-	-	-	-
45	9239	SHJO	*02:01	*03:03	+	+	-	-	-	-	-
46	9013	SCHU	*01:02		-	-	-	-	-	-	-
47	9045	TUBO	*05:05		-	-	+	-	+	+	-
48	9303	TER-ND	*01:01		-	-	-	-	-	-	-

101.903-24 – including *Taq* polymerase, IFU-01
101.903-24u – without *Taq* polymerase, IFU-02

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Lot No.: 86Y **Lot-specific information**

CELL LINE VALIDATION SHEET

DQA1*02,05;DQB1*02,03:02 typing kit[2]

					Well									
					8	9	10	11	12	13	14	15	16	17
				Production No.	201549009	201549010	201549010B	201549011	201549012	201549013	201549014	201549015	201549016	201549017
	IHWC cell line[1]		DQB1											
1	9001	SA	*05:01		-	-	+	-	-	-	-	-	-	-
2	9280	LK707	*06:01	*02:02	+	+	+	-	+	-	-	-	-	-
3	9011	E4181324	*06:01		-	-	+	-	-	-	-	-	-	-
4	9275	GU373	*02:01		+	-	+	-	+	-	-	-	-	-
5	9009	KAS011	*05:02		-	-	+	-	-	-	-	-	-	-
6	9353	SM	*03:02	*06:01	-	-	+	-	+	+	-	+	-	-
7	9020	QBL	*02:01		+	-	+	-	+	-	-	-	-	-
8	9025	DEU	*03:01		-	-	+	-	-	-	-	+	-	+
9	9026	YAR	*03:02		-	-	+	-	+	+	-	+	-	-
10	9107	LKT3	*04:01		-	-	+	-	-	-	-	-	-	-
11	9051	PITOUT	*02:02		+	+	-	-	+	-	-	-	-	-
12	9052	DBB	*03:03		-	-	+	+	-	+	-	+	-	-
13	9004	JESTHOM	*05:01		-	-	+	-	-	-	-	-	-	-
14	9071	OLGA	*04:02		-	-	+	-	-	-	-	-	-	-
15	9075	DKB	*03:03		-	-	+	+	-	+	-	+	-	-
16	9037	SWEIG007	*03:01		-	-	+	-	-	-	-	+	-	+
17	9282	CTM3953540	*02:01	*0603	+	-	+	-	+	-	-	-	-	-
18	9257	32367	*06:02	*02:02	+	+	+	-	+	-	-	-	-	-
19	9038	BM16	*03:01		-	-	+	-	-	-	-	+	-	+
20	9059	SLE005	*06:04		-	-	+	-	-	-	-	-	-	-
21	9064	AMALA	*03:01		-	-	-	-	-	-	-	+	-	+
22	9056	KOSE	*05:03	*06:04	-	-	+	-	-	-	-	-	-	-
23	9124	IHL	*05:03	*06:01	-	-	+	-	-	-	-	-	-	-
24	9035	JBUSH	*03:01		-	-	+	-	-	-	-	+	-	+
25	9049	IBW9	*02:02		+	+	+	-	+	-	-	-	-	-
26	9285	WT49	*02:01		+	-	+	-	+	-	-	-	-	-
27	9191	CH1007	*04:01	*05:01	-	-	+	-	-	-	-	-	-	-
28	9320	BEL5GB	*02:02	*03:01	+	+	+	-	+	-	-	+	-	+
29	9050	MOU	*02:02		+	+	+	-	+	-	-	-	-	-
30	9021	RSH	*04:02		-	-	+	-	-	-	-	-	-	-
31	9019	DUCAF	*02:01		+	-	+	-	+	-	-	-	-	-
32	9297	HAG	*03:01		-	-	-	-	-	-	-	+	-	+
33	9098	MT14B	*03:02		-	-	+	-	+	+	-	+	-	-
34	9104	DHIF	*03:01		-	-	+	-	-	-	-	+	-	+
35	9302	SSTO	*03:05		-	-	+	-	-	-	-	+	-	-
36	9024	KT17	*03:02		-	-	+	-	+	+	-	+	-	-
37	9065	HHKB	*06:03		-	-	+	-	-	-	-	-	-	-
38	9099	LZL	*03:01		-	-	+	-	-	-	-	+	-	+
39	9315	CML	*02:01	*03:01	+	-	+	-	+	-	-	+	-	+
40	9134	WHONP199	*02:02	*03:03	+	+	+	-	+	+	-	+	-	-
41	9055	H0301	*06:09		-	-	+	-	-	-	-	-	-	-
42	9066	TAB089	*06:01		-	-	+	-	-	-	-	-	-	-
43	9076	T7526	*03:03		-	-	+	-	-	+	-	+	-	-
44	9057	TEM	*05:03		-	-	+	-	-	-	-	-	-	-
45	9239	SHJO	*02:02		+	+	-	-	+	-	-	-	-	-
46	9013	SCHU	*06:02		-	-	+	-	-	-	-	-	-	-
47	9045	TUBO	*03:01		-	-	+	-	-	-	-	+	-	+
48	9303	TER-ND	*05:01		-	-	+	-	-	-	-	-	-	-

101.903-24 – including *Taq* polymerase, IFU-01
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Lot No.: 86Y **Lot-specific information**

[1]The provided cell line HLA specificities are retrieved from the http://www.ihwg.org/hla web site. The specificity of an individual cell line may thus be subject to change.

[2]The specificity of each primer solution in the kit has been tested against 48 well characterized cell line DNAs and where applicable, additional cell line DNAs.
In primer solutions 4 and 8 one 5'-primer were not possible to test, and in primer solutions 13 to 15 one 3'-primer were not possible to test.
Additional primers in primer solutions 4 and 14 were tested by separately adding either one 5'-primer, or two 3'-primers.

Lot No.: 86Y **Lot-specific information**

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