

Technical Information

# Investigator<sup>®</sup> Human Identification PCR Kits

The QIAGEN portfolio of multiplex PCR human identification kits offers the most comprehensive and versatile coverage of current international STR standards. These include the European Standard Set (ESS), Combined DNA Index (CODIS), other non-standard loci and unique gonosomal loci. The kits are well suited for use in molecular forensics, paternity and kinship analyses, as well as cell line identification. The following tables summarize the kit markers by standard and dye color.

Table 1. Markers of the Investigator Human Identification PCR Kits by international standard

	Investigator 24plex QS Kit	Investigator 24plex GO! Kit	Investigator 26plex QS Kit	Investigator ES5plex SE QS Kit	Investigator IDplex Plus Kit	Investigator IDplex GO! Kit	Investigator Triplex AFS QS Kit	Investigator HDplex Kit	Investigator Argus X-12 QS Kit	Investigator Argus Y-28 QS Kit	Investigator DIPlex Kit	
<b>Amelogenin</b>	AM	AM	AM	AM	AM	AM	AM	AM			AM	
<b>Quality Sensor</b>	QS1, QS2	QS1, QS2	QS1, QS2		QS			QS	QS1, QS2			
<b>International Standards</b>	20 CODIS core loci (Hares, 2015)	12 ESS core loci	D1S1656	D1S1656	D1S1656							
			D2S441	D2S441	D2S441							
			D10S1248	D10S1248	D10S1248							
			D12S391	D12S391	D12S391		D12S391					
			D22S1045	D22S1045	D22S1045							
			D3S1358	D3S1358	D3S1358	D3S1358						
			D8S1179	D8S1179	D8S1179	D8S1179						
			D18S51	D18S51	D18S51	D18S51	D18S51					
			D21S11	D21S11	D21S11	D21S11		D21S11				
			TH01	TH01	TH01	TH01						
			vWA	vWA	vWA	vWA						
			FGA	FGA	FGA	FGA	FGA					
			D2S1338	D2S1338	D2S1338	D2S1338						
			D19S433	D19S433	D19S433	D19S433						
			D16S539	D16S539	D16S539	D16S539						
			D5S818	D5S818	D5S818	D5S818						
			D7S820	D7S820	D7S820	D7S820						
			D13S317	D13S317	D13S317	D13S317						
			CSF1PO	CSF1PO	CSF1PO	CSF1PO						
			TPOX	TPOX	TPOX	TPOX						
<b>Additional loci</b>	SE33 DY391	DY391 D6S1043 Penta D Penta E	SE33		SE33	SE33	D2S1360 D3S1744 D4S2366 D5S2500 D6S474 D7S1517 D8S1132 D10S2325 D21S2055	DXS7132 DXS7423 DXS8378 DXS10074 DXS10079 DXS10101 DXS10103 DXS10134 DXS10135 DXS10146 DXS10148 HPRTB	DYS19 DYS385* DYS389I DYS389II DYS390 DYS391 DYS392 DYS393 DYS437 DYS438 DYS439 DYS448	DYS449 DYS456 DYS458 DYS460 DYS481 DYS518 DYS533 DYS549 DYS570 DYS576 DYS627 DYS635	DYS643 YGATAH4	30 DIPS

\* duplicated locus

Please check [www.fbi.gov](http://www.fbi.gov) for NDIS approved kits.

Table 2. Autosomal STR markers of the Investigator Human Identification PCR Kits by dye color

Locus	Chromosomal mapping	Label dye						
		Investigator 24plex QS Kit	Investigator 24plex GOI Kit	Investigator 26plex QS Kit	Investigator ES5plex SE QS Kit	Investigator IDplex Plus Kit	Investigator IDplex GOI Kit	Investigator HDplex Kit
Amelogenin	Xp22.1–22.3, Yp11.2	6-FAM™	6-FAM	6-FAM	6-FAM	6-FAM	6-FAM	6-FAM
QS1		BTP	BTP	6-FAM				6-FAM
D1S1656	1q42	BTG	BTG	BTG				
D2S441	2p14	BTR2	BTR2	BTR				
D2S1338	2q35	BTY	BTY	BTY	BTG			
D3S1358	3p25.3	6-FAM	6-FAM	6-FAM	6-FAM			
D2S1360	2p24-p22						6-FAM	
D3S1744	3p24						6-FAM	
D4S2366	4p16-15.2						6-FAM	
D5S2500	5q11.2						BTG	
D5S818	5q23.2	BTP	BTP		BTG			
D6S474	6q21-22						6-FAM	
D6S1043	6q16.1		6-FAM					
D7S820	7q21.11	BTP	BTP		BTG			
D7S1517	7q31.33						6-FAM	
D8S1132	8q23.1						BTG	
D8S1179	8q23.1–23.2	BTY	BTY	BTY	BTR			
D10S1248	10q26.3	BTY	BTY	BTY				
D10S2325	10p12						BTY	
D12S391	12p13.2	BTG	BTG	BTY			6-FAM	
D13S317	13q31.1	BTP	BTP		BTY			
D16S539	16q24.1	BTP	BTP	BTG	BTY			
D18S51	18q21.3	BTR2	BTR2	BTR	BTR	BTG		
D19S433	19q12	BTY	BTY	BTG	BTG			
D21S11	21q21.1	6-FAM	6-FAM	6-FAM	6-FAM			
D21S2055	21q22						BTG	
D22S1045	22q12.3	BTY	BTY	BTY				
FGA (FIBRA)	4q28.2	BTR2	BTR2	BTR	BTR			6-FAM
SE33 (ACTBP2)	6q14.2	BTG		BTG			BTY	6-FAM
TH01 (TC11)	11p15.5	6-FAM	6-FAM	6-FAM	6-FAM			
vWA	12p13.31	6-FAM	BTR2	6-FAM	6-FAM			
TPOX	2p25.3	BTG	BTG		BTG			
CSF1PO	5q33.1	BTP	BTP		BTY			
DYS391	Yq11.21	BTG	BTG					
Penta D	21q22.3		6-FAM					
Penta E	15q26.2		BTG					
QS2		BTP	BTP	6-FAM				

**Table 3. X-chromosomal STR markers of the Investigator Argus X-12 QS Kit by dye color**

*Investigator Argus  
X-12 QS Kit*

Locus	Chromosomal mapping	Label dye
Amelogenin	Xp22.1–22.3, Yp11.2	6-FAM
QS1	—	6-FAM
DXS7132	Xq11.2	BTG
DXS7423	Xq28	BTY
DXS8378	Xp22.31	6-FAM
DXS10074	Xq12	BTG
DXS10079	Xq12	BTY
DXS10101	Xq26.2	6-FAM
DXS10103	Xq26.2	6-FAM
DXS10134	Xq28	6-FAM
DXS10135	Xp22.31	BTG
DXS10146	Xq28	BTY
DXS10148	Xp22.31	BTR
HPRTB	Xq26.2	BTR
D21S11	21q21.1	BTR

**Table 4. Y-chromosomal STR markers of the Investigator Argus Y-28 QS Kit by dye color**

*Investigator  
Argus Y-28 QS Kit*

Locus	Label dye
QS1	BTP
DYS19	BTG
DYS385*	BTP
DYS389-I	6-FAM
DYS389-II	6-FAM
DYS390	6-FAM
DYS391	6-FAM
DYS392	BTP
DYS393	BTG
DYS437	BTG
DYS438	BTR2
DYS439	BTR2
DYS448	BTY
DYS449	BTG
DYS456	BTR2
DYS458	BTG
DYS460	BTY
DYS481	BTY
DYS518	BTY
DYS533	6-FAM
DYS549	BTR2
DYS570	BTP
DYS576	BTY
DYS627	6-FAM
DYS635	BTP
DYS643	BTR2
YGATAH4	BTY
QS2	BTP

#### References

1. Hares, D. R. (2015) Selection and implementation of expanded CODIS core loci in the United States. *Forensic Sci. Int. Genet.* **17**, 33–34.

## Ordering Information

Product	Contents	Cat. no.
Investigator 24plex QS Kit (100)*	Primer Mix, Fast Reaction Mix 2.0, Control DNA, Allelic Ladder 24plex, DNA Size Standard 24plex (BTO) and Nuclease-Free Water	382415
Investigator 24plex GO! Kit (200)*	Primer Mix, Fast Reaction Mix 2.0, Control DNA, Allelic Ladder 24plex, DNA Size Standard 24plex (BTO)	382426
Investigator 26plex QS (100)*	Primer Mix, Fast Reaction Mix 3.0, Control DNA, Allelic Ladder 26plex and Nuclease-Free Water	382615
Investigator ESSplex SE QS Kit (100)*	Primer Mix, Fast Reaction Mix 2.0, Control DNA, Allelic Ladder ESSplex SE QS, DNA Size Standard 550 (BTO) and Nuclease-Free Water	381575
Investigator IDplex Plus Kit (100)*	Primer Mix, Fast Reaction Mix, Control DNA, Allelic Ladder IDplex Plus, DNA Size Standard 550 (BTO) and Nuclease-Free Water	381625
Investigator IDplex GO! Kit (200)	Primer Mix, Fast Reaction Mix, Control DNA, Allelic Ladder IDplex GO! DNA Size Standard 550 (BTO)	381636
Investigator Triplex AFS QS Kit (400)	Primer Mix, Reaction Mix, DNA Polymerase, Control DNA, Allelic Ladder Triplex AFS, DNA Size Standard 550 (ROX) and Nuclease-Free Water	380317
Investigator HDplex Kit (100)	Primer Mix, Reaction Mix, DNA Polymerase, Control DNA, Allelic Ladder HDplex, DNA Size Standard 550 (BTO) and Nuclease-Free Water	381215
Investigator Argus X-12 QS Kit (25)*	Primer Mix, Fast Reaction Mix 2.0, Control DNA, Allelic Ladder Argus X-12 QS, DNA Size Standard 550 (BTO) and Nuclease-Free Water	383223
Investigator Argus Y-28 QS Kit (100)*	Primer Mix, Fast Reaction Mix 3.0, Control DNA, Allelic Ladder Argus X-28 QS, DNA Size Standard 24plex (BTO) and Nuclease-Free Water	383625
Investigator DIPplex Kit (100)	Primer Mix, Reaction Mix, DNA Polymerase, Control DNA, Allelic Ladder DIPplex, DNA Size Standard 550 (BTO) and Nuclease-Free Water	384015

\* Larger kit sizes available; please inquire.

Investigator STR Kits meet ISO 18385 requirements.

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