QIAseq RNA Fusion XP Panels

Sarcoma

Cat. nos. 334602 JHS-005Z-12 and 334605 JHS-005Z-96

For constructing molecularly barcoded libraries from RNA for gene fusion, exon skipping, gene expression, and RNA SNV/InDel analysis using digital NGS

The QIAseq RNA Fusion XP Sarcoma Panel permits the use of next-generation sequencing using 1,238 primers to detect fusions to 116 genes and RNA SNP/indels in 72 genes frequently observed in sarcoma samples as well as the relative gene expression of 86 genes with signatures relevant to sarcomas. Such frequently detected mutations and fusions are likely to be relevant or even important to sarcoma biology and may be used in translational research to classify samples with known phenotypes. Using the Catalogue of Somatic Mutations in Cancer (COSMIC), frequently mutated genes and frequently detected fusions were collected for angiosarcomas, chondrosarcomas, clear cell sarcomas, endometrial stromal sarcomas, epithelioid sarcomas, Ewing sarcomas, fibrosarcoma, gastrointestinal stromal tumors (GIST), leiomyosarcomas, liposarcomas, osteosarcomas, rhabdomyosarcomas, synovial sarcomas, and other sarcomas. For the same cancer subtypes, additional fusions were also collected from the Archer Quiver Database, the Human Somatic Mutation Database (HSMD), requests and suggestions by QIAGEN KOLs and SMEs, and other peer-reviewed publications. Peer-reviewed publications were used to collect gene expression markers for sarcomas and their subtypes, cancer stem cell and their proliferation, and those with possible prognostic significance in terms of chemotherapy resistance, clinical outcome, immunotherapy response, invasiveness, and metastasis. Genes whose expression is altered due to genetic alterations in sarcomas are also included. Using digital DNA sequencing, fusions to, relative gene expression of, and RNA SNP/indels in three different focused panels of genes relevant to sarcomas can be assessed with this primer pool.

For further details, consult the *QIAseq RNA Fusion XP Panels Handbook*.

Shipping and storage

The QIAseq RNA Fusion XP Panel Kit is shipped with dry ice (Box 1) and must be stored at −20°C upon arrival. Box 2 (QIAseq Beads) is shipped on cold packs and should be stored at 4°C. When stored under these conditions and handled correctly, the product can be kept based on the expiration date on each component without reduction in performance.

Note: Open the package and store the products appropriately immediately upon receipt.

Panel Contents

QIAseq RNA Fusion XP Panel catalog number	**334602**	**334605**
No. of preps	**12**	**96**
Box 1 of 2		
QIAseq RNA Fusion XP Panel	48 µL	384 µL
RP Primer II	12 µL	96 µL
EZ Reverse Transcriptase	15 µL	96 µL
BC3 Buffer, 5x	24 µL	192 µL
RNase Inhibitor	12 µL	96 µL
RH RNase	12 µL	96 µL
dNTP II	18 µL	144 µL
BLU Buffer, 10x	24 µL	192 µL
POL Enzyme	12 µL	96 µL
ERA Enzyme	120 µL	960 µL
ERA Buffer, 10x	60 µL	480 µL
DNA Ligase	120 µL	960 µL
Ligation Buffer, 5x	240 µL	2 × 1250 µL
TEPCR Buffer, 5x	60 µL	500 µL
RNA Buffer II, 5x	48 µL	2 × 384µL
TaqIT Plus enzyme	15 µL	2 × 120 µL
HotStarTaq® DNA Polymerase	30 µL	240 µL
Box 2 of 2		
QIAseq Beads	10 mL	55 mL

Gene Table: RNA Fusions

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ACVR2A	ALK	ASPSCR1	ATF1
BAIAP2L1	BCOR	BRAF	CAMTA1
CCDC6	CCNB3	CD74	CDX1
CEP85L	CIC	CITED2	COL1A1
COL6A3	CREB1	CREB3L1	CREB3L2
CREM	CSF1	CXorf67	DDIT3
DVL2	EGFR	EML4	EPC1
ERG	ETV1	ETV4	ETV6
EWSR1	FEV	FGF1	FGFR1
FGFR3	FLI1	FN1	FOXO1
FOXO4	FUS	GLI1	HEY1
HMGA2	IRF2BP2	JAZF1	KIF5B
KLF17	LEUTX	LGR5	LMNA
MAML3	MBTD1	MEAF6	MED12
MET	MKL2	NAB2	NCOA1
NCOA2	NCOA4	NFATC2	NPM1
NR4A3	NTRK1	NTRK3	NUP107
NUTM2A	NUTM2B	PATZ1	PAX3
PAX7	PAX8	PBX3	PDGFB
PHF1	PLAG1	POU5F1	PPARG
PRDM10	RELA	RET	ROS1
RUNX1	RUNX1T1	S100A10	SEPTIN14
SFPQ	SLC34A2	SLC45A3	SMARCA5
SP3	SRF	SS18	SS18L1
SSX1	SSX2	SSX4B	STAT6
SUZ12	TACC3	TAF15	TCF12
TEAD1	TFE3	TFG	TMPRSS2
TOM1L2	TPM3	USP6	VGLL2
WT1	YAP1	YWHAE	ZC3H7B

Gene Table: Gene Expression

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
ACKR3	ACTA2	AFAP1L1	ALDH1A1
ALK	AMACR	ANO1	ASS1
ATP1A1	BCL11B	BCL2	BCOR
CALCRL	CAMTA1	CCNB3	CCND1
CD109	CD248	CD274	CD34
CD44	CD9	CD99	CDCA2
CDK4	CEBPB	CLU	COL22A1
CR2	CTAG1B	CXCR4	DES
EGFR	ERG	ETV4	EZH2
FCER2	FLI1	FOSB	GFAP
GLG1	GPS2	GRIA2	HIF1A
IGF1	IGF1R	IGF2	IGFBP2
IGFBP7	INHBA	ITGA10	KIF14
KIT	LAMP3	MCAM	MDM2
MET	MKI67	MUC4	MYC
MYOD1	MYOG	NKX2-2	PAX7
PDGFRA	PDGFRB	PECAM1	PROM1
RB1	RRM2	S100A1	SATB2
SDHA	SDHB	SLFN11	SMARCB1
SOX10	SOX2	STAT6	STEAP1
TERT	TFE3	TLE1	VEGFA
VIM	WT1		

Gene Table: RNA SNP/indel

Gene Symbol	Gene Symbol	Gene Symbol	Gene Symbol
AKT1	ALK	APC	AR
ARID1A	ARID2	ASXL1	ATM
BCOR	BRAF	CBL	CD209
CD79B	CDKN2A	CIC	CREBBP
CTNNB1	DAXX	DGCR8	DICER1
DNMT3A	EGFR	ERBB2	ERBB3
EZH2	FBXW7	FGFR1	FGFR2
FGFR3	FGFR4	FLT3	GNAS
H3F3A	HRAS	IDH1	IDH2
IRS4	JAK1	JAK3	KIT
KMT2D	KRAS	MED12	MET
MLH1	MLLT3	MPL	MYOD1
NCOR1	NCOR2	NOTCH2	NRAS
PAX5	PBRM1	PDGFRA	PIK3CA
PIK3CB	PIK3R1	PLCG1	POLE
PTEN	PTPN11	RECQL4	SH2B3
SMAD2	SMARCB1	TERT	TNC
TRAF7	TRRAP	WNK2	ZFHX3

Functional Groupings

<u>GENE FUSIONS:</u>

Alveolar Soft Part Sarcomas: ASPSCR1, TFE3.

Angiosarcomas & Epitheliod Haemangioendotheliomas: CAMTA1, CEP85L, CIC, LEUTX, ROS1, TFE3, YAP1.

Askins Tumors: ERG, EWSR1, FLI1, FUS.

Chondrosarcomas: ACVR2A, CDX1, EWSR1, FN1, HEY1, IRF2BP2, NCOA2, NR4A3, TAF15, TCF12, TFG.

Clear Cell Sarcomas: ATF1, CREB1, EWSR1, FLI1, NUTM2B, YWHAE.

Congenital (Infantile) Fibrosarcomas: ETV6, MET, NTRK3, TFG.

Dermatofibrosarcoma Protuberans: COL1A1, PDGFB.

Dermatofibrosarcomas Protuberans: COL1A1, PDGFB.

Desmoplastic Small Round Cell Tumors: ERG, EWSR1, FLI1, PATZ1, WT1.

Endometrial Stromal Sarcomas: ALK, BCOR, CXorf67, EPC1, FN1, JAZF1, MBTD1, MEAF6, NUTM2A, NUTM2B, PHF1, SUZ12, YWHAE, ZC3H7B.

Epithelioid Sarcomas: CREB3L1, CREB3L2, EWSR1, FUS, KLF17, SS18, SSX1.

Ewing's Sarcomas: CIC, ERG, ETV1, ETV4, EWSR1, FEV, FLI1, FOXO4, FUS, NFATC2, SMARCA5, SP3.

Fibrosarcomas: BRAF, COL1A1, CREB3L1, CREB3L2, EWSR1, FUS, LMNA, NTRK1, PDGFB, TOM1L2.

Leiomyosarcomas: EWSR1, HMGA2, PBX3, WT1.

Liposarcomas: DDIT3, EWSR1, FUS, HMGA2, LGR5, NUP107.

Myofibroblastic Sarcomas: ALK, LMNA, NTRK1, RELA, ROS1, SRF, TFG, TPM3, YWHAE.

Myxofibrosarcomas: CREB3L1, CREB3L2, FUS.

Myxoid Chondrosarcomas: NR4A3, TAF15.

Perivascular Epithelioid Cell Tumors (PEComa): DVL2, SFPQ, TFE3.

Pleomorphic Sarcomas (Malignant Fibrous Histiocytoma): CITED2, MED12, PRDM10.

Rhabdoid Tumors: NCOA4, RET.

Rhabdomyosarcomas: CITED2, EWSR1, FLI1, FOXO1, NCOA1, NCOA2, PAX3, PAX7, SRF, TEAD1, VGLL2.

Small Round Cell Tumors: ERG, ETV1, EWSR1, FEV, FLI1, FOXO1, PAX3.

Solitary Fibrous Tumors: NAB2, STAT6.

Synovial Sarcomas: COL6A3, CSF1, S100A10, SS18, SS18L1, SSX1, SSX2, SSX4B.

Undifferentiated; Unclassified or Other Sarcomas: ATF1, BCOR, CCNB3, CREM, ERG, ETV4, EWSR1, FGF1, FGFR1, FLI1, FN1, FOXO1, FUS, GLI1, JAZF1, MAML3, MKL2, NPM1, PAX3, PLAG1, POU5F1, RUNX1, RUNX1T1, SUZ12, USP6.

Commercial Control Samples: ALK, BAIAP2L1, BRAF, CCDC6, CD74, EGFR, EML4, ERG, ETV6, FGFR3, KIF5B, LMNA, MET, NCOA4, NTRK1, NTRK3, PAX8, PPARG, RET, ROS1, SEPT14, SLC34A2, SLC45A3, TACC3, TFG, TMPRSS2, TPM3.

GENE EXPRESSION:

General Sarcoma Markers: CD248, CD34, EGFR, ERG, MCAM, PDGFRA, PDGFRB, PROM1, S100A1, SOX2, TERT, VIM.

Sarcoma Type & Subtype Markers

Alveolar Soft Part Sarcomas: INHBA, TFE3.

Angiosarcomas & Epitheliod Haemangioendotheliomas: CAMTA1, DES, ERG, FOSB, MYC, PECAM1, TFE3.

Chondrosarcomas: AMACR, FLI1, SATB2, VEGFA.

Dermatofibrosarcoma Protuberans: GRIA2.

Desmoplastic Small Round Cell Tumors: WT1.

Endometrial Stromal Sarcomas: ACTA2, BCOR, DES, EGFR, KIT.

Epitheliod Sarcomas: CD109.

Ewing's Sarcomas: ALDH1A1, ATP1A1, BCL11B, CCND1, CD99, FLI1, GLG1, NKX2-2, PAX7, RRM2, SLFN11, STEAP1, VEGFA.

Fibromyxoid Sarcomas: ANO1, MUC4.

Follicular Dendritic Cell Sarcomas: CLU, CR2, FCER2.

Gastrointestinal Stromal Tumors (GIST): ACTA2, ANO1, CALCRL, CD44, COL22A1, IGF1, IGF1R, IGF2, KIT, MUC4, PROM1, SDHA, SDHB.

Gonadal Stromal Tumors: CD99, INHBA, WT1.

Intimal Sarcomas: CDK4, MDM2, PDGFRA.

Leiomyosarcomas: ACTA2, ANO1, DES.

Liposarcomas: CDK4, DES, MDM2.

Malignant Peripheral Nerve Sheath Tumors (MPNST): ALK, BCL2, CDK4, GFAP, SMARCB1, SOX10, TLE1.

Myofibroblastic Sarcomas: ALK, BCL2, RB1.

Myxofibrosarcomas: AMACR, ASS1, CDK4, ITGA10, MDM2, MET.

Osteosarcomas: ALDH1A1, CDK4, FLI1, LAMP3, MDM2, SATB2, VEGFA.

Rhabdoid Tumors: ETV4, SMARCB1.

Rhabdomyosarcomas: ACTA2, ALDH1A1, ALK, CDK4, DES, IGFBP2, MDM2, MYOD1, MYOG, PAX7.

Solitary Fibrous Tumors: ALDH1A1, GRIA2, STAT6.

Spindle Cell Sarcomas: AFAP1L1.

Synovial Sarcomas: ANO1, BCL2, CDCA2, EZH2, FLI1, INHBA, KIF14, MUC4, PAX7, TLE1.

Undifferentiated; Unclassified or Other Sarcomas: CCNB3, SOX10, WT1.

Possible Prognostic Significance

Associated with Invasiveness: CD44, PROM1, STEAP1, TERT.

Associated with Metastasis: ACKR3, CD9, CDCA2, CTAG1B, CXCR4, EZH2, IGFBP7, ITGA10, KIF14.

Chemotherapy Resistance: ALDH1A1, AMACR, CEBPB, PDGFRA, PDGFRB, STEAP1.

Clinical Outcome or Tumor Grade Indicators: AFAP1L1, AMACR, CD109, CD274, CD44, CD9, CDCA2, CDK4, CTAG1B, CXCR4, EZH2, GPS2, IGF1R, IGFBP2, KIF14, MCAM, MDM2, STEAP1, TERT, VEGFA.

Hypoxia & Oxidative Stress: HIF1A, STEAP1, VEGFA.

Immunotherapy Response: CD274, CTAG1B.

Treatment Targets or Treatment Indicators: IGF1R, RRM2, SLFN11.

Cancer Stem Cell & Proliferation Markers: ALDH1A1, CD44, MKI67, PDGFRA, PDGFRB.

Expression Affected by Genomic Variation: ALK, ATP1A1, BCL11B, BCOR, ERG, ETV4, FLI1, GLG1, NKX2-2, SOX2, WT1.

RNA SNP/INDELS:

Alveolar Soft Part Sarcomas: APC, KMT2D, PTEN.

Angiosarcomas & Epitheliod Haemangioendotheliomas: AKT1, ALK, APC, AR, ARID1A, ARID2, ASXL1, ATM, BRAF, CDKN2A, CIC, CREBBP, CTNNB1, EGFR, ERBB2, ERBB3, EZH2, FBXW7, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, HRAS, JAK3, KMT2D, KRAS, MED12, MET, MLH1, MPL, NCOR1, NOTCH2, NRAS, PAX5, PBRM1, PIK3CA, PIK3CB, PIK3R1, PLCG1, PTEN, TERT, TRAF7, TRRAP, ZFHX3.

Chondrosarcomas: ALK, AR, ARID1A, CDKN2A, DNMT3A, ERBB3, H3-3A, HRAS, IDH1, IDH2, IRS4, JAK1, KMT2D, MLLT3, NRAS, POLE, PTEN, SMAD2, SMARCB1, TERT, ZFHX3.

Chordomas: ALK, APC, AR, ARID1A, ATM, CBL, CDKN2A, CTNNB1, KIT, KMT2D, NRAS, PIK3CA, PTEN, SMARCB1.

Clear Cell Sarcomas: BRAF, CDKN2A, EGFR, NRAS, PTEN.

Dermatofibrosarcoma Protuberans: FGFR1, MED12.

Desmoplastic Small Round Cell Tumors: APC, CIC, CREBBP, DAXX, EGFR.

Endometrial Stromal Sarcomas: ASXL1, CTNNB1, ERBB3, FBXW7, FGFR2, FLT3, KRAS, MED12, PIK3CA.

Epithelioid Sarcomas: DICER1, SMARCB1.

Ewing's Sarcomas: ALK, APC, AR, ARID1A, ARID2, ASXL1, ATM, BCOR, BRAF, CBL, CD209, CD79B, CDKN2A, CIC, CREBBP, CTNNB1, DAXX, DGCR8, DICER1, DNMT3A, EGFR, ERBB2, EZH2, FBXW7, FGFR1, FGFR3, FGFR4, GNAS, HRAS, IDH1, IDH2, IRS4, KIT, KMT2D, KRAS, MED12, MET, MLH1, MLLT3, MYOD1, NCOR1, NCOR2, NOTCH2, NRAS, PAX5, PBRM1, PIK3CA, PIK3CB, PIK3R1, PLCG1, POLE, PTEN, RECQL4, SMARCB1, TERT, TNC, TRAF7, TRRAP, ZFHX3.

Fibrosarcomas: BCOR, CDKN2A, CTNNB1, EGFR, EZH2, FGFR3, FLT3, KIT, KRAS, NRAS, POLE, PTEN, TERT, TRAF7.

Gastrointestinal Stromal Tumors (GIST): ALK, APC, AR, ARID1A, ARID2, ASXL1, BRAF, CBL, CDKN2A, CREBBP, DAXX, DICER1, EGFR, FBXW7, FGFR1, H3-3A, JAK1, KIT, KMT2D, KRAS, MED12, MYOD1, NOTCH2, PBRM1, PDGFRA, PIK3CA, POLE, PTEN, RECQL4, SH2B3, TERT, TRAF7, ZFHX3.

Kaposi Sarcomas: BRAF, PIK3CA.

Leiomyosarcomas: ALK, APC, AR, ARID1A, ARID2, ASXL1, ATM, CBL, CREBBP, DAXX, DNMT3A, ERBB3, EZH2, FGFR1, FGFR3, JAK1, JAK3, MET, MPL, NCOR1, PAX5, RECQL4, TRAF7.

Liposarcomas: AKT1, ALK, APC, ARID1A, ATM, BRAF, CBL, CD79B, CDKN2A, CIC, CTNNB1, DICER1, DNMT3A, EGFR, ERBB2, FBXW7, FGFR1, FGFR2, FGFR3, HRAS, JAK1, JAK3, KIT, KMT2D, KRAS, MLH1, MPL, NCOR1, NOTCH2, PBRM1, PDGFRA, PIK3CA, PIK3R1, POLE, PTEN, RECQL4, TERT, ZFHX3.

Malignant Peripheral Nerve Sheath Tumors (MPNST): ARID2, BCOR, BRAF, CBL, CDKN2A, KRAS, NRAS, PAX5, PDGFRA, TERT.

Osteosarcomas: AKT1, ALK, APC, AR, ARID1A, ASXL1, BCOR, BRAF, CBL, CD209, CDKN2A, CREBBP, DAXX, DNMT3A, EGFR, FBXW7, FGFR3, FGFR4, FLT3, GNAS, H3-3A, IDH2, JAK1, JAK3, KMT2D, MED12, MET, MLH1, MLLT3, NCOR1, NCOR2, NOTCH2, PBRM1, PIK3CA, PIK3CB, PIK3R1, POLE, PTEN, RECQL4, SMAD2, TERT, TNC, TRRAP, WNK2, ZFHX3.

Perivascular Epithelioid Cell Tumors (PEComa): ALK, ATM, CIC, JAK3, MED12, NOTCH2.

Pleomorphic Sarcomas (Malignant Fibrous Histiocytoma): ALK, APC, AR, ARID1A, ARID2, ASXL1, ATM, BRAF, CD79B, CDKN2A, CIC, CTNNB1, DICER1, DNMT3A, EGFR, ERBB2, ERBB3, EZH2, FBXW7, FGFR1, FGFR4, FLT3, HRAS, IDH1, JAK1, JAK3, KIT, KMT2D, KRAS, MET, MLH1, MYOD1, NCOR1, NOTCH2, NRAS, PAX5, PBRM1, PIK3CA, POLE, PTEN, PTPN11, SMARCB1, TERT, TRAF7, ZFHX3.

Rhabdoid Tumors: CREBBP, PBRM1, SMARCB1.

Rhabdomyosarcomas: ALK, APC, AR, ARID1A, ARID2, ASXL1, ATM, BCOR, BRAF, CDKN2A, CIC, CREBBP, CTNNB1, DAXX, DGCR8, DICER1, DNMT3A, ERBB2, ERBB3, EZH2, FBXW7, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, GNAS, HRAS, IRS4, KIT, KMT2D, KRAS, MED12, MET, MLH1, MPL, MYOD1, NCOR2, NOTCH2, NRAS, PDGFRA, PIK3CA, POLE, PTEN, PTPN11, RECQL4, SH2B3, SMARCB1, TNC, TRAF7, TRRAP, WNK2, ZFHX3.

Solitary Fibrous Tumors: ALK, APC, ARID2, CBL, FBXW7, FGFR1, FGFR3, KMT2D, PIK3R1, PTEN, TERT.

Synovial Sarcomas: ARID2, BCOR, BRAF, CTNNB1, EGFR, FGFR1, HRAS, KMT2D, KRAS, MED12, MLH1, PDGFRA, PIK3CA, PIK3R1, PTEN, TERT, TRAF7, TRRAP, ZFHX3.

Undifferentiated; Unclassified or Other Sarcomas: ARID2, ATM, CIC, CREBBP, CTNNB1, DICER1, EGFR, FBXW7, FLT3, H3-3A, MED12, MET, NCOR1, NOTCH2, PBRM1, SH2B3.

Ordering Information

Product	Contents	Cat. no.
QIAseq RNA Fusion XP Panel (12)	Kit containing ALL reagents (except indices) sufficient to process 12 samples for RNA sequencing analysis of gene fusions, gene expression and RNA SNP/InDel	334602
QIAseq RNA Fusion XP Panel (96)	Kit containing ALL reagents (except indices) sufficient to process 96 samples for RNA sequencing analysis of gene fusions, gene expression and RNA SNP/InDel	334605
QIAseq RNA Fusion XP Custom Panel	Kit containing reagents for first-strand synthesis, second- strand synthesis, end-repair/A-addition, gene-specific amplification, and QIAseq Beads for RNA Fusion XP sequencing, custom panel for 96 samples	334625
QIAseq RNA Fusion XP Booster Panel	Pool of primers used in combination with either catalogued or custom panels	334635
QIAseq 8-Unique Dual Index Set A (48)	Box containing unique dual-indexed adapters, for indexing up to 8 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 48 samples; the first of 2 sets required for multiplexing up to 16 samples	333715
QIAseq 8-Unique Dual Index Set B (48)	Box containing unique dual-indexed adapters, for indexing up to 8 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 48 samples; the second of 2 sets required for multiplexing up to 16 samples	333716
QIAseq 96-Unique Dual Index Set A (384)	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 384 samples; the first of 2 sets required for multiplexing up to 192 samples	333725
QIAseq 96-Unique Dual Index Set B (384)	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 384 samples; the second of 2 sets required for multiplexing up to 192 samples	333735
QIAseq 96-Unique Dual Index Set A V2 (96) *	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 96 samples; four sets are required for multiplexing up to 384 samples	331745

Product	Contents	Cat. no.
QIAseq 96-Unique Dual Index Set B V2 (96) *	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 96 samples; four sets are required for multiplexing up to 384 samples	331755
QIAseq 96-Unique Dual Index Set C V2 (96) *	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 96 samples; four sets are required for multiplexing up to 384 samples	331765
QIAseq 96-Unique Dual Index Set D V2 (96) *	Box containing unique dual-indexed adapters, for indexing up to 96 samples for QIAseq Targeted Panel sequencing on Illumina platforms; enough to process a total of 96 samples; four sets are required for multiplexing up to 384 samples	331775
QIAseq 12-Index L (48)	Box containing oligos, enough for a total of 48 samples, for indexing up to 12 samples for targeted panel sequencing on Ion Torrent platforms	333764
QIAseq 96-Index L (384)	Box containing oligos in arrays, enough for a total of 384 samples, for indexing up to 96 samples for targeted panel sequencing on Ion Torrent platforms	333777
Human XpressRef Universal Total RNA	2 tubes each containing 100 µg human RNA at 1mg/mL	338112
RNeasy Mini Kit (50)	50 RNeasy Mini Spin Columns, Collection Tubes (1.5 mL and 2 mL), RNase-free reagents, and buffers	74104
RNeasy FFPE Kit (50)	50 RNeasy MinElute® Spin Columns, Collection Tubes, Proteinase K, RNase-Free DNase I, DNase Booster Buffer, RNase-free buffers, and Nuclease-Free Water	73504
PAXgene® Blood RNA Kit (50)	50 PAXgene Spin Columns, 50 PAXgene Shredder Spin Columns, Processing Tubes, RNase-Free DNase I, RNase- free reagents, and buffers; to be used in conjunction with PAXgene Blood RNA Tubes	762174
RNeasy Micro Kit (50)	50 RNeasy MinElute Spin Columns, Collection Tubes (1.5 mL and 2 mL), RNase-free DNase I, Carrier RNA, RNase-free reagents, and buffers	74004
QIAamp® RNA Blood Mini Kit (50)	50 QIAamp Mini Spin Columns, 50 QIAshredder Spin Columns, Collection Tubes (1.5 mL and 2 mL), RNase-free reagents, and buffers	52304

Product	Contents	Cat. no.
QIAseq FastSelect – rRNA HMR Kit (24)	Includes 3 tubes of QIAseq FastSelect reagent for rRNA removal: sufficient for 24 reactions from human, mouse, and rat samples	334386
QIAseq FastSelect – rRNA/Globin Kit (24)	Includes 1 tube of QIAseq FastSelect reagent for rRNA removal and 1 tube of QIAseq FastSelect reagent for globin mRNA removal	335376

QIAseq RNA Fusion XP Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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