

RTPCR Primers

Primer sets for specific canine transcripts have been designed and optimized for robust, unambiguous RTPCR analysis. Each primer set is designed to amplify a multi-exon region, which allows for distinction of genomic contamination products from the RTPCR product. Primers are tested and validated to produce a single, transcript-specific amplicon, with the predicted sequence, under the recommended cycling conditions.

- Included:
- 1 100 ul of each primer @ 10 ng/ul (enough for 250 reactions).
 - 2 Primer sequences and recommended cycling conditions. [Example](#)
 - 3 mRNA sequence showing exon structure and primer positions. [Example](#)
(additional primers are shown)
 - 4 Gel image of RTPCR product from a positive tissue. [Example](#)

Item #	Gene	Alt. Gene Names	Accession #	For Primer	Rev Primer	Product size (bp)	Positive Test Tissue
P1	APOE	apolipoprotein E	XM_860950	1882	1884	546	uterus
P2	B7H1	CD274	XM_541302	1886	1888	394	uterus+
P3	Beta Actin	ACTB	XM_536888	1076	1077	455	PBMC
P4	Calponin	SPECC1	XM_542053	1792	1794	390	uterus
P5	CCL7	CCL-7: MCL:-3	XM_548268	1890	1891	293	PBMC
P6	CCSP	Uteroglobin precursor: CCPBP, CC10, UP1	XM_533268	2027	2029	324	lung
P7	CD105		XM_846376	1662	1664	414	tissue mix
P8	CD11b	ITGAM	XM_843434	1697	1699	424	tissue mix
P9	CD133	Prominin-like protein AC133	XM_845738	1749	1750	486	uterus
P10	CD14		XM_843653	1685	1687	394	tissue mix
P11	CD146	MCAM	XM_546486	1677	1679	487	tissue mix
P12	CD26	DPP4, DPP IV, ADABP	XM_535933	1893	1894	475	uterus+ PBMC
P13	CD34		NM_001003341	1745	1746	499	uterus+ blastocst

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P14	CD40	TNFRSF5	NM_001002982	1897	1898	410	uterus+ PBMC
P15	CD45	tyrosine phosphatase, receptor type, C	XM_547374	1689	1691	464	tissue mix
P16	CD54	ICAM-1	XM_542075	1901	1902	476	uterus+
P17	CD68		XM_546594	1706	1707	467	tissue mix
P18	CD80	B7-1	NM_001003147	1905	1906	486	uterus PBMC
P19	CD90	THY1	XM_546483	1760	1762	422	mix of uterus + blastocyst
P21	RANK	ODFR, Rec. activator of NF-KB, Osteoclast diff. Fact. Rec.	XM_541077	1727	1728	503	tissue mix
P22	CXCR4	(C-X-C motif) receptor 4	NM_001048026	1848	1850	500	pancreas
P23	Desmin		NM_001012394	1787	1788	385	uterus
P24	FGF-9	Fibroblast growth factor 9	XM_844845	2035	2036	477	Lung
P25	FLT-1	VEGFR1	XM_534520	1879	1880	386	uterus
P26	FLT-4	VEGFR3	XM_538585	1875	1876	450	uterus
P27	GPR125		XM_545977	1817	1818	40-21	testis
P28	HNF1B	HNF1 homeobox B FJHN; HNF2; LFB3; TCF2; HPC11; LF-B3; MODY5; VHNF1; HNF1beta	XM_847901	1853	1854	460	pancreas
P29	HNF4A	TCF; HNF4; MODY; MODY1; NR2A1; TCF14; HNF4a7; HNF4a8; HNF4a9; NR2A21; FLJ39654	XM_861103	1857	1858	421	pancreas
P30	IL1R1	(IL-1R-1) (IL-1RT1) (IL-1R-alpha) (p80) (Antigen CD121a)	XM_538449	1913	1914	440	uterus+ PBMC+
P31	IL3R	interleukin 3 receptor, alpha precursor	XM_846533	1923	1924	289	uterus +
P32	INDO	Indoleamine-pyrrole 2,3- dioxygenase	XM_532793	1927	1928	437	uterus+
P33	ITGA6		XM_535964	1805	1806	410	testis
P34	KDR	flk-1, VEGFR2	DQ269018	1753	1754	527	uterus
P35	KLF4		XM_538779	1306	1319	439	testes
P36	KREMEN1		XM_543466	1947	1948	386	uterus/PBMC
P37	Lox 1		XM_543821	1863	1865	425	uterus
P38	MERTK		XM_540175	1951	1952	523	uterus/PBMC
P39	MMP9		XM_540175	1953	1954	384	uterus/PBMC

Item #	Gene	Alt. Gene Names	Accession #	For Primer	Rev Primer	Product size (bp)	Positive Test Tissue
P40	MYOCD	Myocardin MYCD	XM_546628	1783	1784	450	uterus
P41	NCAD	CDH2 neural cadherin	XM_537293	1831	1832	404	pancreas
P42	NOS3	nitric oxide synthase 3 (endothelial cell NOS)	NM_001003158	1777	1778	373	uterus
P43	RET	ret proto-oncogene co-receptor	XM_543915	1799	1800	513	testis
P44	SFTPC	SP-C, SP5, Val	XM_534578	1724	1723	339	tissue mix
P45	SSP1	OPN	XM_535649	1963	1964	387	uterus/PBMC
P46	Tie2		No available seq. Used	1649	1651	440	tissue mix
P47	TLR4	Toll-like receptor 4	NM_001002950	1973	1974	495	uterus/PMBC
P48	TSP1	THBS1 Thrombospondin	XM_544610	1967	1968	457	uterus/PMBC
P49	VE-Cadherin	(Cadherin-5) (7B4antigen) (CD144 antigen)	XM_546894	1771	1772	515	uterus
P50	VWF	von Willebrand factor	NM_001002932	1767	1768	462	uterus