

Imprinted transcriptional units in human and mouse - 21 December 2005							
Please advise regarding errors and omissions							
Location	Transcriptional unit	Functional component	Imprinting Human	Imprinting Mouse	Expressed allele	Protein Name or description	RNA ^b Description
Human (Mouse)	Human (Mouse)						
1p36 (4 E2)	TP73 (Trp73)		I	NR	M	Tumour related protein	
1p31	DIRAS3		I	NO	P	Ras homolog	
2p15 (11 A3)	COMMD1 (Commd1)		NI	I	M	Copper metabolism gene Murr1	
	(U2af1-rs1)		NO	I	P	U2 small nuclear RNP auxiliary factor	
4q13 (5 E1)	(Mkrn1-ps1)		NO	I	P		Pseudogene
4q22 (6 C1)	NAP1L5 (Nap1l5)		NR	I	P	Nucleosome assembly protein	
6q24 (10 A1)	HYMAI (Hymai)		I	NR	P		misc RNA
	PLAGL1 (Plagl1)		I	I	P	Zinc finger protein	
6q25 (17 A1)	IGF2R (Igf2r)		NI	I	M	Insulin-like growth factor receptor 2	
	(Air)		NO	I	P		Igf2r AS
	SLC22A2 (Slc22a2)		NR	I	M	Organic cation transporter	
	SLC22A3 (Slc22a3)		NR	I	M	Organic cation transporter	
7p12 (11 A1)	GRB10 (Grb10)		I	I	P/M ^e	Growth factor receptor-bound protein	
7q21 (6 A1)	CALCR (Calcr)		PD	I	M	Calcitonin receptor	
	SGCE (Sgce)		I	I	P	Sarcoglycan, epsilon	
	PEG10 (Peg10)		I	I	P	Retroviral gag pol homologue	
	PPP1R9A (Ppp1r9a)		I	I	M	Protein phosphatase inhibitor	
	PON1 (Pon1)		PD	NI	P	Paraoxonase 1	
	PON3 (Pon3)		NR	PD	M	Paraoxonase 3	
	PON2 (Pon2)		NR	PD	M	Paraoxonase 2	
	ASB4 (Asb4)		NR	I	M	Ankyrin repeat and SOCS box	
	DLX5 (Dlx5)		I	I	M	Homeo box-containing	
7q32 (6 A3)	CPA4 (Cpa4)		I	NR	M	Carboxypeptidase	
	MEST (Mest)		I	I	P	Alpha/beta hydrolase fold family	
	MESTIT1		I	NO	P		MEST AS
	COPG2IT1 (Copgas2)		I	I	P		COPG2 AS
	COPG2 (Copg2)		CD	I	P(M) ^d	Coatomer protein complex subunit	
8q24 (15 D3)	(Peg13)		NO	I	P		misc RNA
10q22 (10 B4)	STOX1		PD	NR	M	Storkhead box 1	
	CTNNA3 (Catna3)		PD	NR	M	Catenin, alpha 3	
10q25 (19 D2)	(Ins1)		NO	CD	P	Insulin I	
10q26 (7 F3)	INPP5F (Inpp5f)	V2 isoform only	NR	I	P	Inositol phosphatase	
11p15 (7 F5)	H19 (H19)		I	I	M		misc RNA
	IGF2 (Igf2)		I	I	P	Insulin-like growth factor 2	
	IGF2AS (Igf2as)		I	I	P		IGF2 AS
	INS (Ins2)		I	I	P	Insulin	
	ASCL2 (Ascl2)		CD	I	M	HLH transcription factor	
	PHEMX (Phemx)		NI	I	M	Tetraspanin superfamily	
	CD81 (Cd81)		NI	I	M	Transmembrane 4 superfamily	
	TSSC4 (Tssc4)		NI	I	M	Tumor suppressing candidate	
	TRPM5 (Trpm5)		PD	NI	P	Ca ²⁺ -activated cation channel	
	KCNQ1 (Kcnq1)		I	I	M	Voltage-gated potassium channel	
	KCNQ1OT1 (Kcnq1ot1)		I	I	P		KCNQ1 AS
	KCNQ1DN		I	NO	M	BWRT protein	
	CDKN1C (Cdkn1c)		I	I	M	Cyclin-dependent kinase inhibitor	
	SLC22A1LS		PD	NO	M	SLC22A1LS putative protein	
	(Msuit1, AF313042)		NO	I	M		misc RNA
	SLC22A18 (Slc22a18)		I	I	M	Organic cation transporter	

	PHLDA2 (Phlda2)		I	I	M	Pleckstrin homology-like domain	
	NAP1L4 (Nap1l4)		NR	I	M	Nucleosome assembly protein	
	(Tnfrsf23)		NO	I	M	TNF receptor superfamily	
	OSBPL5 (Osbp15)		I	I	M	Oxysterol binding protein-like 5	
	ZNF215		PD	NO	M	Zinc finger protein	
11p13 (2 E)	WT1-Alt transcript (Wt1)		I	NR	P	Zinc finger protein	
	WT1AS (Wt1as)		I	NR	P		WT1 AS
11q23 (9 A5)	SDHD (Sdhd)		CD	NR	P	Succinate dehydrogenase, subunit	
12q13 (15 F1)	SLC38A4 (Slc38a4)		NR	I	P	Amino acid transporter	
12q21 (10 C3)	DCN (Dcn)		NR	I	M	Proteoglycan	
13q14 (14 D2)	HTR2A (Htr2a)		CD	I	M	Serotonin receptor	
14q32 (12 F1)	DLK1 (Dlk1)		I	I	P	Delta-like 1 homolog	
	DLK1 downstream transcripts		NR	I	P		misc RNA
	MEG3 (Gtl2)		I	I	M		misc RNA
	miR-337		NR	I	M		miRNA
	LOC388015 (Rtl1)		NR	I	P	Retrotransposon-like 1	
	Anti-PEG11 (anti-Rtl1)	anti-Rtl1	NR	I	M		Rtl1-AS
		miR-431	NR	I	M		miRNA
		miR-433	NR	PD	M		miRNA
		miR-127	NR	I	M		miRNA
		miR-434	NR	PD	M		miRNA
		miR-432	NR	PD	M		miRNA
		miR-136	NR	I	M		miRNA
	MEG8 (Rian)	MEG8 (Rian)	NR	I	M		snoRNA host
		miR-370	NR	I	M		miRNA
		(MBII-78)	NO	I	M		snoRNA
		(MBII-19)	NO	I	M		snoRNA
		14q(0)	NR	I	M		snoRNA
		14q(I) (MBII-48)	NR	I	M		snoRNA
		(MBII-49)	NO	I	M		snoRNA
		(MBII-426)	NO	I	M		snoRNA
		14q(II) (MBII-343)	NR	I	M		snoRNA
	(Mirg)	(Mirg)	NR	I	M		miRNA host
		miR-411	NR	I	M		miRNA
		miR-380	NR	I	M		miRNA
		miR-376b	NR	I	M		miRNA
		miR-376	NR	I	M		miRNA
		miR-134	NR	I	M		miRNA
		miR-154	NR	I	M		miRNA
		miR-410	NR	I	M		miRNA
	DIO3 (Dio3)		NR	I	P	Deiodinase, iodothyronine type III	
15q11-q12 (7B5)	(Peg12)		NO	I	P	Gsk-3-binding protein family	
	MKRN3 (Mkrn3)		I	I	P	Makorin, ring finger protein	
	ZNF127AS (Zfp127as)		NR	I	P		MKRN3 AS
	MAGEL2 (Magel2)		I	I	P	MAGE-like protein	
	NDN (Ndn)		I	I	P	Necdin, neuronal growth suppressor	
	(AK014392)		NR	PD	P		Ndn AS
	(Pec2)		NR	I	P		LINE-rich intergenic
	(Pec3)		NR	I	P		LINE-rich intergenic
	(Nccr)		NR	I	P		?miRNA host
	SNURF-SNRPN	SNURF (Snurf)	I	I	P	SNRPN upstream reading frame	
		SNRPN (Snrpn)	I	I	P	Small nuclear ribonucleoprotein	

		HBII-436	I	I	P		snoRNA
		HBII-13	I	I	P		snoRNA
		HBII-437	I	NO	P		snoRNA
		HBII-438A	I	NO	P		snoRNA
		PWCR1 (Pwcr1)	I	I	P		snoRNA
		HBII-52	I	I	P		snoRNA
		HBII-438B	I	NO	P		snoRNA
		UBE3A-AS	I	I	P		UBE3A AS
		UBE3A (Ube3a)	I	I	M	Ubiquitin protein ligase	
		ATP10A (Atp10a)	I	CD	M	ATPase, Class V	
		GABRB3 (Gabrb3)	CD	NI	P	Gamma-aminobutyric acid receptor	
		GABRA5 (Gabra5)	CD	NI	P	Gamma-aminobutyric acid receptor	
		GABRG3 (Gabrg3)	CD	NI	P	Gamma-aminobutyric acid receptor	
15q21 (2 E5)		GATM (Gatm)	NR	I	M	Glycine amidinotransferase	
15q24 (9 E3)		(4930524O08Rik, A19)	NO	I	P		misc RNA
		RASGRF1 (Rasgrf1)	NR	I	P	Guanine nucleotide exchange factor	
18q11 (18A2-B2)		IMPACT (Impact)	NI	I	P	Imprinted and ancient	
18q21		TCEB3C	I	NO	M	Transcription elongation factor	
19q13 (7 A2-B1)		IMP01/ITUP1	I	NR	P		imprinted transcript variant1
		PEG3 (Peg3)	I	I	P	Zinc-finger protein	
		(Zim1)	NO	I	M	Zinc-finger protein	
		ZIM2 (Zim2)	I	I	P(M) ^d	Zinc-finger protein	
		USP29 (Usp29)	NR	I	P	Ubiquitin-specific protease	
		ZIM3 (Zim3)	NR	I	M	Zinc-finger protein (human)	No ORF (mouse)
		ZNF264 (Zfp264)	NR	I	P	Zinc-finger protein (human)	No ORF (mouse)
20q11 (2 H1)		NNAT (Nnat)	I	I	P	Neuronatin	
20q13 (2 H3)		L3MBTL (L3mbtl)	I	NI	P	Polycomb group	
20q13 (2 E1-H3)		GNAS (Gnas)	NESP55	I	I	M	Neuroendocrine secretory protein 55
		GNASXL	I	I	P	Large isoform of GS-a	
		(F7)	NO	PD	M	Hypothetical protein (Mm.358828)	
		Exon-1A	I	I	P		misc RNA
		GS-alpha	I	I	M	Stimulatory G-protein, alpha subunit	
		SANG (Nespas)	I	I	P		GNAS AS
(X A7)		(Xlr3b)	NO	I	M	X linked lymphocyte regulated	
		(Xlr4b)	NO	I	M	X linked lymphocyte regulated	
		(Xlr4c)	NO	I	M	X linked lymphocyte regulated	
Xq13 (X D)		XIST (Xist)	NI	I	P		XIST
		TSIX (Tsix)	NI	I	M		XIST AS
Abbreviations. AS, antisense transcript; miRNA, microRNAs; misc RNA, RNA of unknown function							
CD, conflicting data; I, reported to be imprinted; NI, reported to be not imprinted; NO, no orthologue known;							
NR, no reports of imprinting status; M, maternal; P, paternal; PD, provisional data							
^b Noncoding RNAs only							
^c I mprinting is isoform dependent.							
^d ZIM2 and COPG2 are reported to be oppositely imprinted in human and mouse.							
Discordances:							
Not imprinted vs Imprinted							
No orthologue							