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Product datasheet for MR211886L1V

Smchd1 (NM_028887) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Smchd1 (NM_028887) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Smchd1
Synonyms:	4931400A14Rik; AW554188; mKIAA0650; MommeD1
Mammalian Cell Selection:	None
Vector:	pLenti-C-Myc-DDK (PS100064)
Tag:	Myc-DDK
ACCN:	NM_028887
ORF Size:	3834 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR211886).
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_028887.3
RefSeq Size:	7053 bp
RefSeq ORF:	6024 bp
Locus ID:	74355
UniProt ID:	Q6P5D8
Cytogenetics:	17 E1.3

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Gene Summary: Non-canonical member of the structural maintenance of chromosomes (SMC) protein family that plays a key role in epigenetic silencing by regulating chromatin architecture (PubMed:26091879, PubMed:29887375). Promotes heterochromatin formation in both autosomes and chromosome X, probably by mediating the merge of chromatin compartments (PubMed:23754746, PubMed:23819640, PubMed:26391951, PubMed:28587678, PubMed:29887375). Plays a key role in chromosome X inactivation in females by promoting the spreading of heterochromatin (PubMed:18425126, PubMed:22841499, PubMed:26391951, PubMed:29887375). Recruited to inactivated chromosome X by Xist RNA and acts by mediating the merge of chromatin compartments: promotes random chromatin interactions that span the boundaries of existing structures, leading to create a compartment-less architecture typical of inactivated chromosome X (PubMed:29887375). Required to facilitate Xist RNA spreading (PubMed:29887375). Also required for silencing of a subset of clustered autosomal loci in somatic cells, such as the DUX4 locus (PubMed:23754746, PubMed:23819640, PubMed:28587678). Has ATPase activity; may participate in structural manipulation of chromatin in an ATP-dependent manner as part of its role in gene expression regulation (PubMed:26391951, PubMed:27059856). Also plays a role in DNA repair: localizes to sites of DNA double-strand breaks in response to DNA damage to promote the repair of DNA double-strand breaks (By similarity). Acts by promoting non-homologous end joining (NHEJ) and inhibiting homologous recombination (HR) repair (By similarity). Required during preimplantation development, probably acts by regulating chromatin architecture (PubMed:29900695).[UniProtKB/Swiss-Prot Function]