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MSL2 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP17353a

Specification

MSL2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9HCI7

MSL2 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 55167

Other Names
E3 ubiquitin-protein ligase MSL2, 632-, Male-specific lethal 2-like 1, MSL2-like 1, Male-specific lethal-2 homolog, MSL-2, Male-specific lethal-2 homolog 1, RING finger protein 184, MSL2, KIAA1585, MSL2L1, RNF184

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MSL2 Antibody (N-term) Blocking Peptide - Protein Information

Name MSL2 {ECO:0000303|PubMed:16227571, ECO:0000312|HGNC:HGNC:25544}

Function
Non-catalytic component of the MSL histone acetyltransferase complex, a multiprotein complex that mediates the majority of histone H4 acetylation at 'Lys-16' (H4K16ac), an epigenetic mark that prevents chromatin compaction (PubMed:16543150, PubMed:33837287). The MSL complex is required for chromosome stability and genome integrity by maintaining homeostatic levels of H4K16ac (PubMed:33837287). The MSL complex is also involved in gene dosage by promoting up-regulation of genes expressed by the X chromosome (By similarity). X up-regulation is required to compensate for autosomal biallelic expression (By similarity). The MSL complex also participates in gene dosage compensation by promoting expression of Tsix non-coding RNA (By similarity). MSL2 plays a key role in gene dosage by ensuring biallelic expression of a subset of dosage-sensitive genes, including many haploinsufficient genes (By similarity). Acts by promoting promoter- enhancer contacts, thereby preventing DNA methylation of one allele and creating a methylation-free environment for methylation-sensitive transcription factors such as SP1, KANSL1 and KANSL3 (By similarity). Also acts as an E3 ubiquitin ligase that promotes monoubiquitination

of histone H2B at 'Lys-35' (H2BK34Ub), but not that of H2A (PubMed:21726816, PubMed:30930284). This activity is greatly enhanced by heterodimerization with MSL1 (PubMed:21726816, PubMed:30930284). H2B ubiquitination in turn stimulates histone H3 methylation at 'Lys-4' (H3K4me) and 'Lys-79' (H3K79me) and leads to gene activation, including that of HOXA9 and MEIS1 (PubMed:21726816). Also involved in the DNA damage response by mediating ubiquitination of TP53/p53 and TP53BP1 (PubMed:19033443, PubMed:23874665).

Cellular Location
Nucleus. Chromosome. Note=Associates with both promoters and enhancers of target genes, maintaining promoter-enhancer contacts {ECO:0000250|UniProtKB:Q69ZF8}

MSL2 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MSL2 Antibody (N-term) Blocking Peptide - Images

MSL2 Antibody (N-term) Blocking Peptide - Background

Component of histone acetyltransferase complex responsible for the majority of histone H4 acetylation at lysine 16 which is implicated in the formation of higher-order chromatin structure.

MSL2 Antibody (N-term) Blocking Peptide - References

Dehghan, A., et al. Circ Cardiovasc Genet 2(2):125-133(2009)Mendjan, S., et al. Mol. Cell 21(6):811-823(2006)Smith, E.R., et al. Mol. Cell. Biol. 25(21):9175-9188(2005)Marin, I. J. Mol. Evol. 56(5):527-539(2003)Lyman, L.M., et al. Genetics 147(4):1743-1753(1997)