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Product datasheet for MC221218

Ezh2 (NM_001146689) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ezh2 (NM_001146689) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ezh2
Synonyms:	Enx-1; Enx1h; KMT6; mKIAA4065
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>MC221218 representing NM_001146689
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCCAGACTGGGAAGAAATCTGAGAAGGGACCGGTTTGTTGGCGGAAGCGTGTAAAATCAGAGTACA
TGAGACTGAGACAGCTCAAGAGGTTCAGAAGAGCTGATGAAGTAAAGACTATGTTTAGTTCCAATCGTCA
GAAAATTTTGGAAAGAACTGAAACCTTAAACCAAGAGTGGAAGCAGCGGAGGATACAGCCTGTGCACATC
ATGACTTCTTGTTCAGTCACCAGTGACTTGGATTTTCCAGCACAAGTCATCCCGTTAAAGACCCTGAATG
CAGTCGCCTCGGTGCCTATAATGTACTCTTGGTCGCCCTTACAACAGAATTTTATGGTGGAAGACGAAAC
TGTTTTACATAACATTCCTTATATGGGGGATGAAGTTCTGGATCAGGATGGCACTTTCATTGAAGAACTA
ATAAAAAATTATGATGGAAAAGTGCATGGTGACAGAGAATGTGGATTTATAAATGATGAAATTTTTGTGG
AGTTGGTAAATGCTCTTGGTCAATATAATGATGATGATGATGACGATGATGGAGATGATCCAGATGAAAG
AGAAGAAAAACAGAAAGATCTAGAGGATAATCGAGATGATAAAGAAACTTGCCCACCTCGGAAATTTCCT
GCTGATAAAATATTTGAAGCCATTTCCTCAATGTTTCCAGATAAGGGCACCGCAGAAGAACTGAAAGAAA
AATATAAAGAACTCACGGAGCAGCAGCTCCCAGGTGCTCTGCCTCCTGAATGTACTCCAAACATCGATGG
ACCAAATGCCAAATCTGTTCAGAGGGAGCAAAGCTTGCATTCATTTCATACGCTCTTCTGTCGACGATGT
TTTAAGTATGACTGCTTCCTACATCGTAAGTGCAGTTATTCCTTCCATGCAACACCCAACACATATAAGA
GGAAGAACACAGAAACAGCTTTGGACAACAAGCCTTGTGGACCACAGTGTTACCAGCATCTGGAGGGAGC
TAAGGAGTTTGCTGCTGCTCTTACTGCTGAGCGTATAAAGACACCACCTAAACGCCCAGGGGGCCGCAGA
AGAGGAAGACTTCCGAATAACAGTAGCAGACCCAGCACCCCCACCATCAGTGTGCTGGAGTCAAAGGATA
CAGACAGTGACAGAGAAGCAGGGACTGAAACTGGGGGAGAGAACAATGATAAAGAAGAAGAAGAGAAAAA
AGATGAGACGTCCAGCTCCTCTGAAGCAAATTCTCGGTGTCAAACACCAATAAAGATGAAGCCAAATATT
GAACCTCCTGAGAATGTGGAGTGGAGTGGTGCTGAAGCCTCCATGTTTAGAGTCCTCATTGGTACTTACT
ACGATAACTTTTGTGCCATTGCTAGGCTAATTGGGACCAAAACATGTAGACAGGTGTATGAGTTTAGAGT
CAAGGAGTCCAGTATCATAGCACCTGTTCCCACTGAGGATGTAGACACTCCTCCAAGAAAGAAGAAAAGG
AAACATCGGTTGTGGGCTGCACACTGCAGAAAGATACAACTGAAAAAGGACGGCTCCTCTAACCATGTTT
ACAACTATCAACCCTGTGACCATCCACGGCAGCCTTGTGACAGTTCGTGCCCTTGTGTGATAGCACAAAA
TTTTTGTGAAAAGTTTTGTCAATGTAGTTCAGAGTGTCAAAACCGCTTTCCTGGATGTCGGTGCAAAGCA
CAATGCAACACCAAACAGTGTCCATGCTACCTGGCTGTCCGAGAGTGTGACCCTGACCTCTGTCTCACGT
GTGGAGCTGCTGACCATTGGGACAGTAAAAATGTATCCTGTAAGAACTGTAGCATTCAGCGGGGCTCTAA
AAAGCACTTACTGCTGGCACCGTCTGATGTGGCAGGCTGGGGCATCTTTATCAAAGATCCTGTACAGAAA
AATGAATTCATCTCAGAATACTGTGGGGAGATTATTTCTCAGGATGAAGCAGACAGAAGAGGAAAAGTGT
ATGACAAATACATGTGCAGCTTTCTGTTCAACTTGAACAATGATTTTGTGGTGGATGCAACCCGAAAGGG
CAACAAAATTCGTTTTGCTAATCATTCAGTAAATCCAAACTGCTATGCAAAAGTTATGATGGTTAATGGT
GACCACAGGATAGGCATCTTTGCTAAGAGGGCTATCCAGACTGGTGAAGAGTTGTTTTTTGATTACAGAT
ACAGCCAGGCTGATGCCCTGAAGTATGTGGGCATCGAACGAGAAATGGAAATCCCTTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001146689

Insert Size: 2229 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001146689.1, NP_001140161.1
RefSeq Size:	2653 bp
RefSeq ORF:	2229 bp
Locus ID:	14056
Cytogenetics:	6 22.92 cM
Gene Summary:	Polycomb group (PcG) protein. Catalytic subunit of the PRC2/EED-EZH2 complex, which methylates (H3K9me) and 'Lys-27' (H3K27me) of histone H3, leading to transcriptional repression of the affected target gene. Able to mono-, di- and trimethylate 'Lys-27' of histone H3 to form H3K27me1, H3K27me2 and H3K27me3, respectively. Displays a preference for substrates with less methylation, loses activity when progressively more methyl groups are incorporated into H3K27, H3K27me0 > H3K27me1 > H3K27me2. Compared to EZH1-containing complexes, it is more abundant in embryonic stem cells and plays a major role in forming H3K27me3, which is required for embryonic stem cell identity and proper differentiation. The PRC2/EED-EZH2 complex may also serve as a recruiting platform for DNA methyltransferases, thereby linking two epigenetic repression systems. Genes repressed by the PRC2/EED-EZH2 complex include HOXA7, HOXB6 and HOXC8. EZH2 can also methylate non-histone proteins such as the transcription factor GATA4 and the nuclear receptor RORA. Regulates the circadian clock via histone methylation at the promoter of the circadian genes. Essential for the CRY1/2-mediated repression of the transcriptional activation of PER1/2 by the CLOCK-ARNTL/BMAL1 heterodimer; involved in the di and trimethylation of 'Lys-27' of histone H3 on PER1/2 promoters which is necessary for the CRY1/2 proteins to inhibit transcription.[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (2) uses an alternate in-frame splice site in the 5' coding region, compared to variant 1. This difference results in a shorter protein (isoform 2), compared to isoform 1.