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Product datasheet for MC209318

Rnf2 (NM_011277) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids

Product Name: Rnf2 (NM_011277) Mouse Untagged Clone

Tag: Tag Free

Symbol: Rnf2

Synonyms: AI326319; AI450156; AU019207; dinG; Ring1B

Vector: pCMV6-Entry (PS100001)

E. coli Selection: Kanamycin (25 ug/mL)

Cell Selection: Neomycin

Fully Sequenced ORF:

>MC209318 representing NM_011277
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCTCAGGCTGTGCAGACAAATGGAACTCAACCATTAAGCAAAACATGGGAACTCAGTTTGTATGAGT
TACAACGAACACCTCAGGAGGCAATAACAGATGGCTTGGAAATTGTGGTTTCACCTAGAAGTCTACACAG
TGAATTAATGTGCCCAATTTGTTTGGATATGTTAAAGAACACCATGACTACAAAGGAGTGTTTACATCGG
TTTTGCGCGGATTGTATTATCACAGCCCTTAGAAGTGGCAACAAAGAGTGTCCTACCTGTCGGAAAAAAC
TGGTTTCTAAAAGATCACTAAGGCCAGACCCGAACTTTGATGCACTCATCAGCAAGATTTATCCCAGTCG
TGATGAGTATGAAGCGCATCAGGAAAGGGTCTTAGCAAGGATCAACAAACACAACAATCAGCAGGCTCTC
AGCCACAGCATCGAGGAGGGGCTGAAGATACAGGCCATGAACAGATTACAGCGAGGCAAAAAGCAGCAGA
TAGAAAATGGTAGTGGAGCAGAAGATAATGGTGACAGCTCCCACTGTAGTAACGCATCCACACACAGCAA
CCAGGAAGCGGGCCCGAGTAACAAACGGACCAAAACCTCTGATGACTCTGGGCTTGAACTTGATAACAAC
AATGCAGCAGTGGCGATTGATCCAGTCATGGACGGTGCCAGTGAGATTGAGTTAGTCTTCAGGCCCCATC
CAACTCTTATGGAAAAGGACGACAGCGCACAGACAAGATACATAAAGACTTCAGGCAATGCCACTGTTGA
TCACTTATCCAAGTATCTGGCTGTGAGGTTAGCTTTAGAAGAACTTCGAAGCAAAGGAGAATCAAACCAG
ATGAACCTGGATACAGCCAGTGAGAAGCAGTACACCATTTACATAGCCACAGCCAGTGGCCAGTTCACCG
TTTTAAATGGCTCCTTTTCTTTGGAATTGGTCAGTGAGAAATACTGGAAAGTGAACAAACCCATGGAACT
TTATTATGCACCCACCAAGGAGCACAAATGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_011277

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Insert Size:	1011 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_011277.2, NP_035407.1
RefSeq Size:	3028 bp
RefSeq ORF:	1011 bp
Locus ID:	19821
UniProt ID:	Q9CQJ4
Cytogenetics:	1 G1

Gene Summary:

E3 ubiquitin-protein ligase that mediates monoubiquitination of 'Lys-119' of histone H2A (H2AK119Ub), thereby playing a central role in histone code and gene regulation (PubMed:15525528, PubMed:22325148, PubMed:28596365). H2AK119Ub gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals (PubMed:15525528, PubMed:28596365). May be involved in the initiation of both imprinted and random X inactivation (PubMed:15525528). Essential component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development (PubMed:22325148, PubMed:16710298). PcG PRC1 complex acts via chromatin remodeling and modification of histones, rendering chromatin heritably changed in its expressibility (PubMed:15525528, PubMed:22325148, PubMed:16710298). E3 ubiquitin-protein ligase activity is enhanced by BMI1/PCGF4 (PubMed:16710298). Acts as the main E3 ubiquitin ligase on histone H2A of the PRC1 complex, while RING1 may rather act as a modulator of RNF2/RING2 activity (PubMed:15525528, PubMed:16710298). Plays a role in the transcriptional repression of genes that are required for pluripotency in embryonic stem cells, thereby contributing to differentiation of the ectodermal and endodermal germ layers (PubMed:22226355). Association with the chromosomal DNA is cell-cycle dependent. In resting B- and T-lymphocytes, interaction with AURKB leads to block its activity, thereby maintaining transcription in resting lymphocytes (PubMed:24034696).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (4) differs in the 5' UTR and coding sequence compared to variant 1. The resulting isoform (b) is shorter at the N-terminus compared to isoform a. Variants 2, 3, and 4 all encode the same isoform (b). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.