

**(Mouse) Rnf2 Blocking Peptide (Center)**  
**Synthetic peptide**  
**Catalog # BP21227c****Specification**

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**(Mouse) Rnf2 Blocking Peptide (Center) - Product Information**Primary Accession [O9CQJ4](#)**(Mouse) Rnf2 Blocking Peptide (Center) - Additional Information****Gene ID** 19821**Other Names**

E3 ubiquitin-protein ligase RING2, 632-, RING finger protein 1B, RING1b, RING finger protein 2, Rnf2, DinG, Ring1b

**Target/Specificity**

The synthetic peptide sequence is selected from aa 165-179 of HUMAN Rnf2

**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.

**(Mouse) Rnf2 Blocking Peptide (Center) - Protein Information****Name** Rnf2**Synonyms** DinG, Ring1b**Function**

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:<a href="http://www.uniprot.org/citations/15525528" target="\_blank">15525528</a>, PubMed:<a href="http://www.uniprot.org/citations/22325148" target="\_blank">22325148</a>, PubMed:<a href="http://www.uniprot.org/citations/28596365" target="\_blank">28596365</a>). H2AK119Ub gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals (PubMed:<a href="http://www.uniprot.org/citations/15525528" target="\_blank">15525528</a>, PubMed:<a href="http://www.uniprot.org/citations/28596365" target="\_blank">28596365</a>). May be involved in the initiation of both imprinted and random X inactivation (PubMed:<a href="http://www.uniprot.org/citations/15525528" target="\_blank">15525528</a>). 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:<a href="http://www.uniprot.org/citations/22325148" target="\_blank">22325148</a>, PubMed:<a href="http://www.uniprot.org/citations/16710298" target="\_blank">16710298</a>). PcG PRC1 complex acts via chromatin remodeling and modification of histones, rendering chromatin heritably changed in its expressibility (PubMed:<a href="http://www.uniprot.org/citations/15525528" target="\_blank">15525528</a>, PubMed:<a href="http://www.uniprot.org/citations/22325148" target="\_blank">22325148</a>, PubMed:<a href="http://www.uniprot.org/citations/16710298" target="\_blank">16710298</a>). E3 ubiquitin-protein ligase activity is enhanced by BMI1/PCGF4 (PubMed:<a href="http://www.uniprot.org/citations/16710298" target="\_blank">16710298</a>). 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:<a href="http://www.uniprot.org/citations/15525528" target="\_blank">15525528</a>, PubMed:<a href="http://www.uniprot.org/citations/16710298" target="\_blank">16710298</a>). 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:<a href="http://www.uniprot.org/citations/22226355" target="\_blank">22226355</a>). 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:<a href="http://www.uniprot.org/citations/24034696" target="\_blank">24034696</a>). Also acts as a negative regulator of autophagy by mediating ubiquitination of AMBRA1, leading to its subsequent degradation (PubMed:<a href="http://www.uniprot.org/citations/24980959" target="\_blank">24980959</a>).

#### **Cellular Location**

Nucleus. Cytoplasm. Chromosome. Note=Enriched on inactive X chromosome (Xi) in female trophoblast stem (TS) cells as well as differentiating embryonic stem (ES) cells (PubMed:12183370). The enrichment on Xi is transient during TS and ES cell differentiation. The association with Xi is mitotically stable in non-differentiated TS cells (PubMed:12183370).

#### **Tissue Location**

Expressed in embryonic stem cells.

### **(Mouse) Rnf2 Blocking Peptide (Center) - Protocols**

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

- [Blocking Peptides](#)

### **(Mouse) Rnf2 Blocking Peptide (Center) - Images**

### **(Mouse) Rnf2 Blocking Peptide (Center) - Background**

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. H2AK119Ub gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals. May be involved in the initiation of both imprinted and random X inactivation. 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. PcG PRC1 complex acts via chromatin remodeling and modification of histones, rendering chromatin heritably changed in its expressibility. E3 ubiquitin-protein ligase activity is enhanced by BMI1/PCGF4. 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. Association to 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.

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Schoorlemmer J., et al. EMBO J. 16:5930-5942(1997).  
Carninci P., et al. Science 309:1559-1563(2005).  
Ebert L., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.  
Garcia E., et al. EMBO J. 18:3404-3418(1999).  
Suzuki M., et al. Development 129:4171-4183(2002).