

RNF168 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP17270b**Specification**

RNF168 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [Q8IYW5](#)**RNF168 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 165918**Other Names**

E3 ubiquitin-protein ligase RNF168, hRNF168, 632-, RING finger protein 168, RNF168

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.

RNF168 Antibody (C-term) Blocking Peptide - Protein Information**Name** RNF168 {ECO:0000255|HAMAP-Rule:MF_03066}**Function**

E3 ubiquitin-protein ligase required for accumulation of repair proteins to sites of DNA damage. Acts with UBE2N/UBC13 to amplify the RNF8-dependent histone ubiquitination. Recruited to sites of DNA damage at double-strand breaks (DSBs) by binding to ubiquitinated histone H2A and H2AX and amplifies the RNF8-dependent H2A ubiquitination, promoting the formation of 'Lys-63'-linked ubiquitin conjugates. This leads to concentrate ubiquitinated histones H2A and H2AX at DNA lesions to the threshold required for recruitment of TP53BP1 and BRCA1. Also recruited at DNA interstrand cross-links (ICLs) sites and promotes accumulation of 'Lys-63'-linked ubiquitination of histones H2A and H2AX, leading to recruitment of FAAP20/C1orf86 and Fanconi anemia (FA) complex, followed by interstrand cross-link repair. H2A ubiquitination also mediates the ATM-dependent transcriptional silencing at regions flanking DSBs in cis, a mechanism to avoid collision between transcription and repair intermediates. Also involved in class switch recombination in immune system, via its role in regulation of DSBs repair. Following DNA damage, promotes the ubiquitination and degradation of JMJD2A/KDM4A in collaboration with RNF8, leading to unmask H4K20me2 mark and promote the recruitment of TP53BP1 at DNA damage sites. Not able to initiate 'Lys-63'-linked ubiquitination in vitro; possibly due to partial occlusion of the UBE2N/UBC13-binding region. Catalyzes monoubiquitination of 'Lys-13' and 'Lys-15' of nucleosomal histone H2A (H2AK13Ub and H2AK15Ub, respectively).

Cellular Location

Nucleus {ECO:0000255|HAMAP-Rule:MF_03066, ECO:0000269|PubMed:19203578, ECO:0000269|PubMed:19203579, ECO:0000269|PubMed:19500350, ECO:0000269|PubMed:21041483, ECO:0000269|PubMed:22742833}. Note=Localizes to double-strand breaks (DSBs) sites of DNA damage. {ECO:0000255|HAMAP-Rule:MF_03066}

RNF168 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RNF168 Antibody (C-term) Blocking Peptide - Images**RNF168 Antibody (C-term) Blocking Peptide - Background**

The complex repair response elicited by DNA double-strandbreaks (DSBs) includes recruitment of several DNA repair proteinsand ubiquitination of H2A-type histones (see MIM 142720). RNF168 isan E3 ubiquitin ligase critical for DSB repair (Stewart et al.,2009 [PubMed 19203578]).

RNF168 Antibody (C-term) Blocking Peptide - References

Lilley, C.E., et al. EMBO J. 29(5):943-955(2010)Noon, A.T., et al. Nat. Cell Biol. 12(2):177-184(2010)Ramachandran, S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(2):809-814(2010)Doil, C., et al. Cell 136(3):435-446(2009)Stewart, G.S., et al. Cell 136(3):420-434(2009)