

Datasheet for ABIN7151208
anti-RNF8 antibody (AA 1-260)



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2 Images

Overview

Quantity:	100 µL
Target:	RNF8
Binding Specificity:	AA 1-260
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This RNF8 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Immunogen:	Recombinant Human E3 ubiquitin-protein ligase RNF8 protein (1-260AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	Antigen Affinity Purified

Target Details

Target:	RNF8
Alternative Name:	RNF8 (RNF8 Products)
Background:	Background: E3 ubiquitin-protein ligase that plays a key role in DNA damage signaling via 2 distinct roles: by mediating the 'Lys-63'-linked ubiquitination of histones H2A and H2AX

and promoting the recruitment of DNA repair proteins at double-strand breaks (DSBs) sites, and by catalyzing Lys-48-linked ubiquitination to remove target proteins from DNA damage sites. Following DNA DSBs, it is recruited to the sites of damage by ATM-phosphorylated MDC1 and catalyzes the Lys-63-linked ubiquitination of histones H2A and H2AX, thereby promoting the formation of TP53BP1 and BRCA1 ionizing radiation-induced foci (IRIF). Also controls the recruitment of UIMC1-BRCC3 (RAP80-BRCC36) and PAXIP1/PTIP to DNA damage sites. Also recruited at DNA interstrand cross-links (ICLs) sites and catalyzes 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. Promotes the formation of Lys-63-linked polyubiquitin chains via interactions with the specific ubiquitin-conjugating UBE2N/UBC13 and ubiquitinates non-histone substrates such as PCNA. Substrates that are polyubiquitinated at Lys-63 are usually not targeted for degradation. Also catalyzes the formation of Lys-48-linked polyubiquitin chains via interaction with the ubiquitin-conjugating UBE2L6/UBCH8, leading to degradation of substrate proteins such as CHEK2, JMJD2A/KDM4A and KU80/XRCC5: it is still unclear how the preference toward Lys-48- versus Lys-63-linked ubiquitination is regulated but it could be due to RNF8 ability to interact with specific E2 specific ligases. For instance, interaction with phosphorylated HERC2 promotes the association between RNF8 and UBE2N/UBC13 and favors the specific formation of Lys-63-linked ubiquitin chains. Promotes non-homologous end joining (NHEJ) by promoting the Lys-48-linked ubiquitination and degradation of KU80/XRCC5. Following DNA damage, mediates the ubiquitination and degradation of JMJD2A/KDM4A in collaboration with RNF168, leading to unmask H4K20me2 mark and promote the recruitment of TP53BP1 at DNA damage sites. In addition to its function in damage signaling, also plays a role in higher-order chromatin structure by mediating extensive chromatin decondensation. Involved in the activation of ATM by promoting histone H2B ubiquitination, which indirectly triggers histone H4 Lys-16 acetylation (H4K16ac), establishing a chromatin environment that promotes efficient activation of ATM kinase. Required in the testis, where it plays a role in the replacement of histones during spermatogenesis. At uncapped telomeres, promotes the joining of deprotected chromosome ends by inducing H2A ubiquitination and TP53BP1 recruitment, suggesting that it may enhance cancer development by aggravating telomere-induced genome instability in case of telomeric crisis. Promotes the assembly of RAD51 at DNA DSBs in the absence of BRCA1 and TP53BP1. Also involved in class switch recombination in immune system, via its role in regulation of DSBs repair. May be required for proper exit from mitosis after spindle checkpoint activation and may

Target Details

regulate cytokinesis. May play a role in the regulation of RXRA-mediated transcriptional activity.
Not involved in RXRA ubiquitination by UBE2E2.
Aliases: C3HC4 type zinc finger protein antibody, E3 ubiquitin protein ligase RNF8 antibody, E3 ubiquitin-protein ligase RNF8 antibody, FLJ12013 antibody, KIAA0646 antibody, Ring finger protein (C3HC4 type) 8 antibody, RING finger protein 8 antibody, Ring finger protein 8, E3 ubiquitin protein ligase antibody, RNF 8 antibody, RNF8 antibody, RNF8_HUMAN antibody, UBC13/UEV interacting ring finger protein antibody

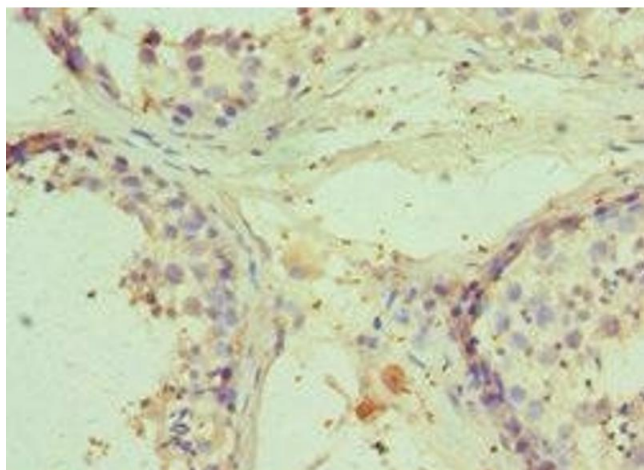
UniProt: [O76064](#)
Pathways: [Production of Molecular Mediator of Immune Response](#)

Application Details

Application Notes: Recommended dilution: WB:1:500-1:5000, IHC:1:20-1:200,
Restrictions: For Research Use only

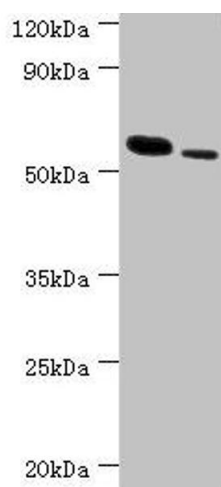
Handling

Format: Liquid
Buffer: PBS with 0.02 % sodium azide, 50 % glycerol, pH 7.3.
Preservative: Sodium azide
Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage: -20 °C,-80 °C
Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



Immunohistochemistry

Image 1. Immunohistochemistry of paraffin-embedded human testis tissue using ABIN7151208 at dilution of 1:100



Western Blotting

Image 2. Western blot All lanes: RNF8 antibody at 11 µg/mL
Lane 1: Hela whole cell lysate Lane 2: 293T whole cell lysate
Secondary Goat polyclonal to rabbit IgG at 1/10000 dilution
Predicted band size: 56, 11, 51 kDa Observed band size: 56 kDa