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WDR48 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP10505b

Specification

WDR48 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession	Q8TAF3
Other Accession	NP_065890.1

WDR48 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 57599

Other Names
WD repeat-containing protein 48, USP1-associated factor 1, WD repeat endosomal protein, p80, WDR48, KIAA1449, UAF1

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.

WDR48 Antibody (C-term) Blocking Peptide - Protein Information

Name WDR48 {ECO:0000303|PubMed:24145035, ECO:0000312|HGNC:HGNC:30914}

Function
Regulator of deubiquitinating complexes, which acts as a strong activator of USP1, USP12 and USP46 (PubMed:18082604, PubMed:19075014, PubMed:31253762, PubMed:26388029). Enhances the USP1- mediated deubiquitination of FANCD2; USP1 being almost inactive by itself (PubMed:18082604, PubMed:31253762). Activates deubiquitination by increasing the catalytic turnover without increasing the affinity of deubiquitinating enzymes for the substrate (PubMed:19075014, PubMed:27373336). Also activates deubiquitinating activity of complexes containing USP12 (PubMed:19075014, PubMed:27650958, PubMed:<a

href="http://www.uniprot.org/citations/27373336" target="_blank">27373336). In complex with USP12, acts as a potential tumor suppressor by positively regulating PHLPP1 stability (PubMed:24145035). Docks at the distal end of the USP12 fingers domain and induces a cascade of structural changes leading to the activation of the enzyme (PubMed:27650958, PubMed:27373336). Together with RAD51AP1, promotes DNA repair by stimulating RAD51-mediated homologous recombination (PubMed:27463890, PubMed:27239033, PubMed:32350107). Binds single- stranded DNA (ssDNA) and double-stranded DNA (dsDNA) (PubMed:27239033, PubMed:31253762, PubMed:32350107). DNA-binding is required both for USP1-mediated deubiquitination of FANCD2 and stimulation of RAD51-mediated homologous recombination: both WDR48/UAF1 and RAD51AP1 have coordinated role in DNA-binding during these processes (PubMed:31253762, PubMed:32350107). Together with ATAD5 and by regulating USP1 activity, has a role in PCNA-mediated translesion synthesis (TLS) by deubiquitinating monoubiquitinated PCNA (PubMed:20147293). Together with ATAD5, has a role in recruiting RAD51 to stalled forks during replication stress (PubMed:31844045).

Cellular Location
Nucleus. Cytoplasm. Lysosome. Late endosome. Note=Mainly in cytoplasmic compartments (PubMed:12196293, PubMed:18032488). In case of infection by papillomavirus HPV11, translocates to the nucleus via its interaction with papillomavirus HPV11 (PubMed:18032488)

Tissue Location
Ubiquitous..

WDR48 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

WDR48 Antibody (C-term) Blocking Peptide - Images

WDR48 Antibody (C-term) Blocking Peptide - Background

Regulator of deubiquitinating complexes. Acts as a strong activator of USP1 by enhancing the USP1-mediated deubiquitination of FANCD2; USP1 being almost inactive by itself. Also activates deubiquitinating activity of complexes containing USP12 and USP46, respectively. Activates deubiquitination by increasing the catalytic turnover without increasing the affinity of deubiquitinating enzymes for the substrate. In case of infection by Herpesvirus saimiri, may play a role in vesicular transport or membrane fusion events necessary for transport to lysosomes. Induces lysosomal vesicle formation via interaction with Herpesvirus saimiri tyrosine kinase-interacting protein (TIP). Subsequently, TIP recruits tyrosine-protein kinase LCK, resulting in down-regulation of T-cell antigen receptor TCR. May play a role in generation of enlarged endosomal vesicles via interaction with TIP. In case of infection by papillomavirus HPV11, promotes the maintenance of the viral genome via its interaction with HPV11 helicase E1.

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WDR48 Antibody (C-term) Blocking Peptide - References

Kee, Y., et al. J. Biol. Chem. 285(15):11252-11257(2010)Cohn, M.A., et al. J. Biol. Chem. 284(8):5343-5351(2009)Cote-Martin, A., et al. J. Virol. 82(3):1271-1283(2008)Cohn, M.A., et al. Mol. Cell 28(5):786-797(2007)Park, J., et al. J. Virol. 77(16):9041-9051(2003)