10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

WDR48 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10505b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q8TAF3
Other Accession	Q4R2Z6, Q32PG3, NP_065890.1
Reactivity	Rat
Predicted	Bovine, Monkey, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28145
Calculated MW	76210
Antigen Region	603-630

Additional Information

Gene ID	57599
Other Names	WD repeat-containing protein 48, USP1-associated factor 1, WD repeat endosomal protein, p80, WDR48, KIAA1449, UAF1
Target/Specificity	This WDR48 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 603-630 amino acids from the C-terminal region of human WDR48.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	WDR48 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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:26388029, PubMed:31253762). 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:27373336, PubMed:27650958). 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:27373336, PubMed:27650958). Together with RAD51AP1, promotes DNA repair by stimulating RAD51-mediated homologous recombination (PubMed:27239033, PubMed:27463890, 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..

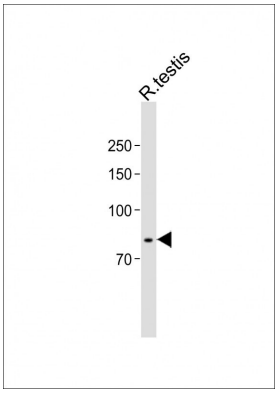
Background

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.

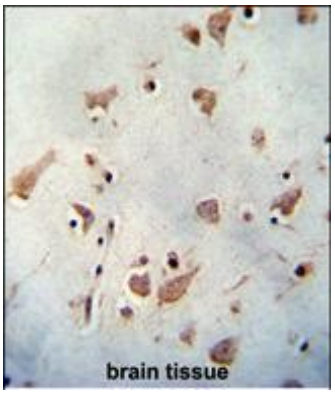
References

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)

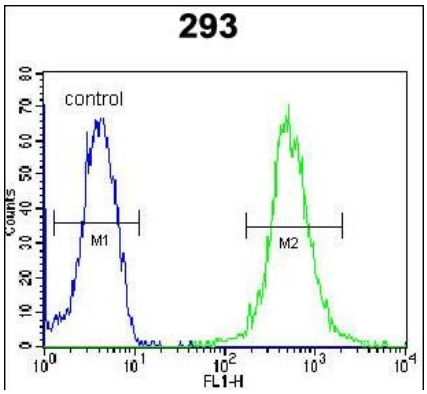
Images



All lanes: Anti-WDR48 Antibody (C-term) at 1:500 dilution + Rat testis lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 76 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



WDR48 antibody (C-term) (Cat. #AP10505b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the WDR48 antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



WDR48 Antibody (C-term) (Cat. #AP10505b) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.