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RWDD3 Antibody
Catalog # ASC10985

Specification

RWDD3 Antibody - Product Information

Application	**WB**
Primary Accession	Q9Y3V2
Other Accession	NP_056300, 153252154
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**RWDD3 antibody can be used for detection of RWDD3 by Western blot at 0.5 µg/mL.**

RWDD3 Antibody - Additional Information

Gene ID	**25950**

Target/Specificity
RWDD3;

Reconstitution & Storage
RWDD3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
RWDD3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RWDD3 Antibody - Protein Information

Name RWDD3

Synonyms RSUME

Function
Enhancer of SUMO conjugation. Via its interaction with UBE2I/UBC9, increases SUMO conjugation to proteins by promoting the binding of E1 and E2 enzymes, thioester linkage between SUMO and UBE2I/UBC9 and transfer of SUMO to specific target proteins which include HIF1A, PIAS, NFKBIA, NR3C1 and TOP1. Isoform 1 and isoform 2 positively regulate the NF-kappa-B signaling pathway by enhancing the sumoylation of NF-kappa-B inhibitor alpha (NFKBIA), promoting its stabilization which consequently leads to an increased inhibition of NF-kappa-B transcriptional activity. Isoform 1 and isoform 2 negatively regulate the hypoxia-inducible factor-1 alpha (HIF1A) signaling pathway by increasing the sumoylation of HIF1A, promoting its stabilization, transcriptional activity and the expression of its target gene VEGFA during hypoxia. Isoform 2 promotes the sumoylation and transcriptional activity of the glucocorticoid receptor NR3C1 and enhances the interaction of SUMO1 and NR3C1 with UBE2I/UBC9. Has no effect on ubiquitination.

Cellular Location
Nucleus. Cytoplasm. Note=Colocalizes with UBC9/UBE2I in nuclear spots.

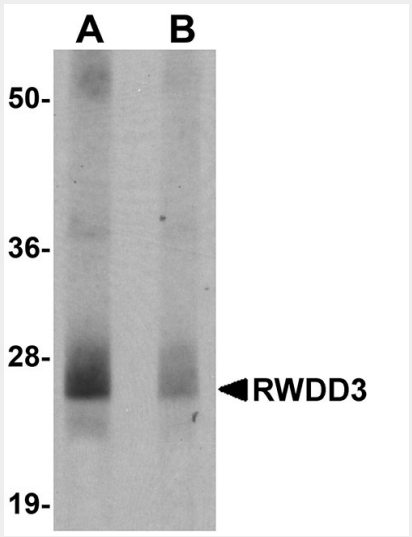
Tissue Location
Isoform 1 and isoform 2 are expressed in glioma tumors (at protein level). Expressed in a wide number of tissues with highest expression in cerebellum, pituitary, heart, kidney, liver, stomach, pancreas, prostate and spleen. Low levels in thalamus, spinal cord, esophagus, thymus, lung and peripheral blood leukocytes. A higher level expression seen in pituitary tumors as compared to the pituitary gland.

RWDD3 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RWDD3 Antibody - Images



Western blot analysis of RWDD3 in mouse kidney tissue lysate with RWDD3 antibody at 0.5 µg/mL in (A) the absence and (B) the presence of blocking peptide.

RWDD3 Antibody - Background

RWDD3 Antibody: RWDD3 (RSUME), a small RWD-containing protein, has a central role in sumoylation by enhancing SUMO conjugation in the regulatory network of immune-inflammatory signals. RWDD3 increases IκBeta sumoylation and stability. In addition, RWDD3 inhibits TNF-α-induced kappaB-LUC (Luciferase) reporter activity, showing the functional consequence of IκBeta increased stability. RSUME-enhanced sumoylation of IκBeta leads to the inhibition of NF-κBeta activity on two well-known inflammatory genes, IL-8 and cyclooxygenase-2 (Cox-2) and therefore may also favor anti-inflammatory pathways. Expression of RWDD3 was induced under

hypoxic conditions and it has a potential role during vascularization. Both BMP-4 and RWDD3 may be interesting targets for inhibiting steps involved in pituitary tumorigenesis.

RWDD3 Antibody - References

Carbia-Nagashima A, Gerez J, Perez-Castro C, et al. RSUME, a small RWD-containing protein, enhances SUMO conjugation and stabilizes HIF-1alpha during hypoxia. Cell2007; 131:309-23.
Liberman AC, Druker J, Garcia FA, et al. Intracellular molecular signaling. Basis for specificity to glucocorticoid anti-inflammatory actions. Ann. NY Acad. Sci.2009; 1153:6-13.
Giacomini D, Haedo M, Gerez J, et al. Differential gene expression in models of pituitary prolactin-producing tumoral cells. Horm. Res.2009; 71 Suppl 2:88-94.