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CRBN Antibody

Catalog # ASC11899

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q96SW2
Other Accession	NP_057386, 39545580
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50546
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CRBN antibody can be used for detection of CRBN by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	51185
Other Names	Protein cereblon, CRBN
Target/Specificity	CRBN; CRBN antibody is human, mouse and rat reactive. At least two isoforms of CRBN are known to exist; this antibody will detect both isoforms.
Reconstitution & Storage	CRBN antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	CRBN Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CRBN
Function	Substrate recognition component of a DCX (DDB1-CUL4-X-box) E3 protein ligase complex that mediates the ubiquitination and subsequent proteasomal degradation of target proteins, such as MEIS2, ILF2, GLUL, IKZF1 and CSNK1A1 (PubMed:26990986, PubMed:33009960, PubMed:41565821). Normal degradation of key regulatory proteins is required for normal limb outgrowth and expression of the fibroblast growth factor FGF8 (PubMed:20223979, PubMed:24328678, PubMed:25043012, PubMed:25108355). Maintains presynaptic glutamate release and consequently cognitive functions, such as memory and learning, by negatively regulating large- conductance calcium-activated potassium (BK) channels in excitatory neurons (PubMed:18414909, PubMed:29530986). Likely to function by regulating the

	assembly and neuronal surface expression of BK channels via its interaction with KCNT1 (PubMed:18414909). May also be involved in regulating anxiety-like behaviors via a BK channel-independent mechanism (By similarity). Plays a negative role in TLR4 signaling by interacting with TRAF6 and ECSIT, leading to inhibition of ECSIT ubiquitination, an important step of the signaling (PubMed:31620128).
Cellular Location	Cytoplasm. Nucleus. Membrane {ECO:0000250|UniProtKB:Q56AP7}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q56AP7}
Tissue Location	Widely expressed. Highly expressed in brain.

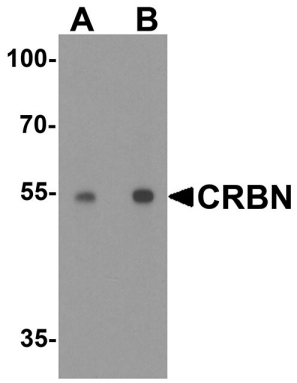
Background

CRBN, a member of the Lon protease protein family, plays a role in brain development (1). It is a component of the DCX (DDB1-CUL4-X-box) E3 protein ligase complex, a complex that mediates the ubiquitination and subsequent proteasomal degradation of target proteins and is required for limb outgrowth and expression of the fibroblast growth factor FGF8 (2). CRBN is thought to regulate the assembly and neuronal surface expression of large-conductance calcium-activated potassium channels in brain regions involved in memory and learning via its interaction with KCNT1. It is widely expressed and highly expressed in brain (3,4).

References

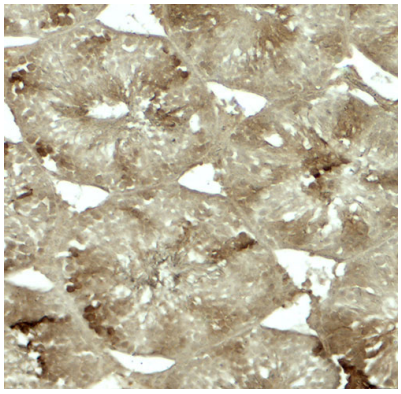
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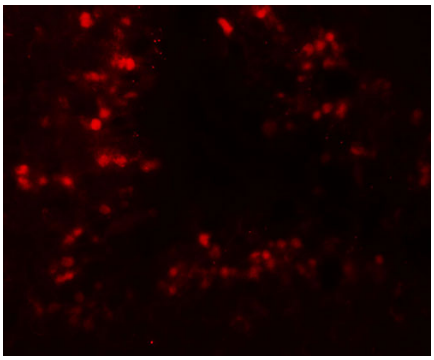
Images



Western blot analysis of CRBN in human testis tissue lysate with CRBN antibody at (A) 0.5 and (B) 1 µg/ml.

Immunohistochemistry of CRBN in rat testis tissue with CRBN antibody at 5 µg/mL.





Immunofluorescence of CRBN in rat testis tissue with CRBN antibody at 20 µg/mL.

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