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CCDC22 Antibody

Catalog # ASC11510

Product Information

Application	WB, IF, E
Primary Accession	O60826
Other Accession	NP_054727, 7661844
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	70756
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CCDC22 antibody can be used for detection of CCDC22 by Western blot at 1 - 2 □g/mL. For immunofluorescence start at 20 □g/mL.

Additional Information

Gene ID	28952
Other Names	Coiled-coil domain-containing protein 22, CCDC22, CXorf37
Target/Specificity	CCDC22; At least three isoforms of CCDC22 are known to exist; this antibody will detect the two largest isoforms.
Reconstitution & Storage	CCDC22 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	CCDC22 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CCDC22
Synonyms	CXorf37
Function	Component of the commander complex that is essential for endosomal recycling of transmembrane cargos; the Commander complex is composed of composed of the CCC subcomplex and the retriever subcomplex (PubMed:37172566, PubMed:38459129). Component of the CCC complex, which is involved in the regulation of endosomal recycling of surface proteins, including integrins, signaling receptor and channels (PubMed:37172566, PubMed:38459129). Involved in regulation of NF-kappa- B signaling (PubMed:23563313). Promotes ubiquitination of I-kappa-B- kinase subunit

	IKBKB and its subsequent proteasomal degradation leading to NF-kappa-B activation; the function may involve association with COMMD8 and a CUL1-dependent E3 ubiquitin ligase complex (PubMed:23563313). May down-regulate NF-kappa-B activity via association with COMMD1 and involving a CUL2-dependent E3 ubiquitin ligase complex. Regulates the cellular localization of COMM domain- containing proteins, such as COMMD1 and COMMD10 (PubMed:23563313). Component of the CCC complex, which is involved in the regulation of endosomal recycling of surface proteins, including integrins, signaling receptor and channels. The CCC complex associates with SNX17, retriever and WASH complexes to prevent lysosomal degradation and promote cell surface recycling of numerous cargos such as integrins ITGA5:ITGB1 (PubMed:25355947, PubMed:28892079). Plays a role in copper ion homeostasis (PubMed:25355947). Involved in copper-dependent ATP7A trafficking between the trans-Golgi network and vesicles in the cell periphery; the function is proposed to depend on its association within the CCC complex and cooperation with the WASH complex on early endosomes (PubMed:25355947).
Cellular Location	Endosome. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome
Tissue Location	Widely expressed in adult tissues and in fetal liver and brain, with highest levels in prostate and lowest in skeletal muscle.

Background

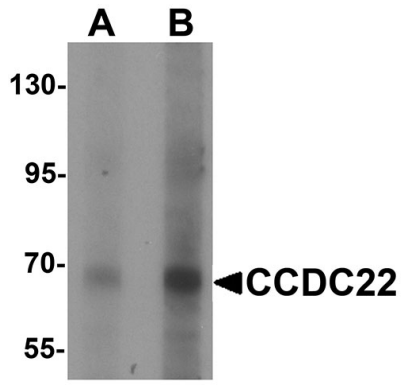
CCDC22 Antibody: CCDC22 is a recently identified coiled-coil domain-containing protein that has been shown to bind copines, which are calcium-dependent, membrane-binding proteins that may function in calcium signaling. In rat, CCDC22 has been observed to localize in multiple regions of the brain, including the prefrontal and somatosensory cortex, dentate gyrus and thalamus, and in the ipsilateral motor neurons of the spinal cord after sciatic nerve transection suggesting that it may play a role in neuronal injury response. The human CCDC22 gene has been identified as a novel candidate gene for syndromic X-linked intellectual disability (XLID).

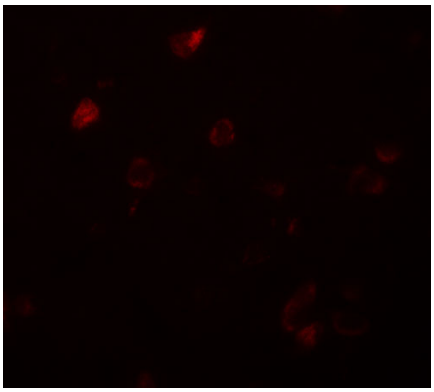
References

Tomsig JL, Snyder SL, and Creutz CE. Identification of targets for calcium signaling through the copine family of proteins. J. Biol. Chem. 2003; 278:10048-54.
Mulder J, Bjorling E, Jonasson K, et al. Tissue profiling of the mammalian central nervous system using human antibody-based proteomics. Mol. Cell Prot. 2009; 8:1612-22.
Mulder J, Wernerus H, Shi TJ, et al. Systematically generated antibodies against human gene products: high throughput screening on sections from the rat nervous system. Neurosci.2007; 146:1689-703
Voineagu I, Huang L, Winden K, et al. CCDC22: a novel candidate gene for syndromic X-linked intellectual disability. Mol. Psych. 2012; 17:4-7.

Images

Western blot analysis of CCDC22 in 293 cell lysate with CCDC22 antibody at (A) 1 and (B) 2 µg/mL.





Immunofluorescence of CCDC22 in human brain tissue with CCDC22 antibody at 20 µg/mL.

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