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

RUSC1 Antibody

Catalog # ASC10986

Product Information

Application	WB, E
Primary Accession	Q9BVN2
Other Accession	NP_001098673, 157412245
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	96444
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	RUSC1 antibody can be used for detection of RUSC1 by Western blot at 1 g/mL.

Additional Information

Gene ID	23623
Other Names	RUN and SH3 domain-containing protein 1, New molecule containing SH3 at the carboxy-terminus, Nesca, RUSC1, NESCA
Target/Specificity	RUSC1;
Reconstitution & Storage	RUSC1 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	RUSC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RUSC1 {ECO:0000303|PubMed:30262884, ECO:0000312|HGNC:HGNC:17153}
Function	Associates with the adapter-like complex 4 (AP-4) and may therefore play a role in vesicular trafficking of proteins at the trans-Golgi network (PubMed:30262884). Signaling adapter which plays a role in neuronal differentiation (PubMed:15024033). Involved in regulation of NGF-dependent neurite outgrowth (PubMed:15024033). May play a role in neuronal vesicular trafficking, specifically involving pre-synaptic membrane proteins (By similarity). Seems to be involved in signaling pathways that are regulated by the prolonged activation of MAPK (PubMed:15024033). Can regulate the polyubiquitination of IKBKG and thus may be involved in regulation of the

NF-kappa-B pathway (PubMed:19365808).

Cellular Location

Cytoplasm. Nucleus. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q8BG26}. Cytoplasmic vesicle {ECO:0000250|UniProtKB:Q8BG26}. Early endosome {ECO:0000250|UniProtKB:Q8BG26}. Postsynaptic density {ECO:0000250|UniProtKB:Q8BG26}. Golgi apparatus {ECO:0000250|UniProtKB:Q8BG26}. Note=Translocated to the nuclear envelope upon stimulation with NGF (PubMed:15024033). Associated with membranes and microtubules (By similarity) {ECO:0000250|UniProtKB:Q8BG26, ECO:0000269|PubMed:15024033}

Tissue Location

Predominantly expressed in brain.

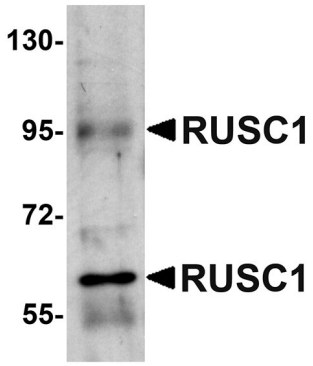
Background

RUSC1 Antibody: RUSC1, also known as NESCA, shares with the related protein RUSC2 a common domain structure of RUN, leucine zipper and SH3 domain in addition to over 30% amino acid identity. RUSC1 is an adapter protein that can bind to the TrkA receptor and is necessary in the NGF-induced neurite growth of PC12 cells. RUSC1 has also been shown to interact with IκB kinase- (IKK-) gamma, the regulatory subunit of the IKK complex that is required for NF-κB activation in many signaling pathways such as TNF-R or the TLR pathways. RUSC1 can also bind to the E3 ubiquitin ligase TRAF6, which then catalyzes RUSC1 polyubiquitination. Since overexpression of RUSC1 strongly inhibits TRAF6-mediated polyubiquitination of IKK-gamma, RUSC1 may be a link in the IKK-gamma-mediated NF-κB activation pathway.

References

Matsuda S, Miyazaki K, Ichigotani Y, et al. Molecular cloning and characterization of a novel human gene (NESCA) which encodes a putative adapter protein containing SH3. Biochim. Biophys. Acta2000; 1491:321-6.
Katoh M and Katoh M. Characterization of RUSC1 and RUSC2 genes in silico. Oncol. Rep.2004; 12:933-8.
MacDonald JI, Kubu CJ, and Meakin SO. Nesca, a novel adapter, translocates to the nuclear envelope and regulates neurotrophin-induced neurite outgrowth. J. Cell Biol.2004; 164:851-62.
Napolitano G, Mirra S, Monfregola J, et al. NESCA: a new NEMO/IKKgamma and TRAF6 interacting protein. J. Cell. Phys.2009; 220:410-7.

Images



Western blot analysis of RUSC1 in A-20 cell lysate with RUSC1 antibody at 1 µg/mL.

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