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SMCR8 Rabbit pAb

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Catalog # AP54913

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8TEV9
Predicted	Rat, Pig, Dog, Human, Mouse, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	105022
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SMCR8
Epitope Specificity	171-270/937
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Additional Information

Gene ID	140775
Other Names	Guanine nucleotide exchange protein SMCR8, Smith-Magenis syndrome chromosomal region candidate gene 8 protein {ECO:0000312|HGNC:HGNC:17921}, SMCR8 (HGNC:17921)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SMCR8 (HGNC:17921)
Function	Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed:20562859, PubMed:27103069, PubMed:27193190, PubMed:27559131, PubMed:27617292, PubMed:28195531, PubMed:32303654). In the complex, C9orf72 and SMCR8 probably constitute the catalytic subunits that promote the exchange of GDP to GTP, converting inactive GDP-bound RAB8A and RAB39B into their active GTP-bound form,

	thereby promoting autophagosome maturation (PubMed:20562859, PubMed:27103069, PubMed:27617292, PubMed:28195531). The C9orf72-SMCR8 complex also acts as a negative regulator of autophagy initiation by interacting with the ULK1/ATG1 kinase complex and inhibiting its protein kinase activity (PubMed:27617292, PubMed:28195531). As part of the C9orf72-SMCR8 complex, stimulates RAB8A and RAB11A GTPase activity in vitro (PubMed:32303654). Acts as a regulator of mTORC1 signaling by promoting phosphorylation of mTORC1 substrates (PubMed:27559131, PubMed:28195531). In addition to its activity in the cytoplasm within the C9orf72-SMCR8 complex, SMCR8 also localizes in the nucleus, where it associates with chromatin and negatively regulates expression of suppresses ULK1 and WIPI2 genes (PubMed:28195531).
Cellular Location	Cytoplasm. Nucleus Presynapse {ECO:0000250|UniProtKB:Q3UMB5}. Postsynapse {ECO:0000250|UniProtKB:Q3UMB5}. Note=Localizes mainly in the cytoplasm
Tissue Location	Expressed in all tissues tested.

Background

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