

# SMCR8 Rabbit pAb

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Catalog # AP54913

## Product Information

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|---------------------|---------------------------------------------------------------------------------------------------------------------------|
| Application         | IHC-P, IHC-F, IF                                                                                                          |
| Primary Accession   | <a href="#">Q8TEV9</a>                                                                                                    |
| 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

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| Gene ID     | 140775                                                                                                                                                                                          |
| Other Names | Guanine nucleotide exchange protein SMCR8, Smith-Magenis syndrome chromosomal region candidate gene 8 protein<br>{ECO:0000312 HGNC:HGNC:17921}, SMCR8 ( <a href="#">HGNC:17921</a> )            |
| 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

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| Name     | SMCR8 ( <a href="#">HGNC:17921</a> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Function | Component of the C9orf72-SMCR8 complex, a complex that has guanine nucleotide exchange factor (GEF) activity and regulates autophagy (PubMed: <a href="#">20562859</a> , PubMed: <a href="#">27103069</a> , PubMed: <a href="#">27193190</a> , PubMed: <a href="#">27559131</a> , PubMed: <a href="#">27617292</a> , PubMed: <a href="#">28195531</a> , PubMed: <a href="#">32303654</a> ). 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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This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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