

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody
Catalog # ABO16799**Specification****Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody - Product Information**

Application	WB
Primary Accession	P49815
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody . Tested in WB applications. This antibody reacts with Human, Mouse.

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody - Additional Information

Gene ID 7249

Other Names

Tuberin, Tuberous sclerosis 2 protein, TSC2 {ECO:0000303|PubMed:7558029, ECO:0000312|HGNC:HGNC:12363}

Application Details

WB 1:500-1:2000

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Phospho-Tuberin (S939)

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody - Protein Information

Name TSC2 {ECO:0000303|PubMed:7558029, ECO:0000312|HGNC:HGNC:12363}

Function

Catalytic component of the TSC-TBC complex, a multiprotein complex that acts as a negative

regulator of the canonical mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:[>12172553, PubMed:\[>12271141, PubMed:\\[>12842888, PubMed:\\\[>12906785, PubMed:\\\\[>15340059, PubMed:\\\\\[>22819219, PubMed:\\\\\\[>24529379, PubMed:\\\\\\\[>28215400, PubMed:\\\\\\\\[>33436626, PubMed:\\\\\\\\\[>35772404\\\\\\\\\\). Within the TSC-TBC complex, TSC2 acts as a GTPase- activating protein \\\\\\\\\\(GAP\\\\\\\\\\) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 \\\\\\\\\\(PubMed:\\\\\\\\\\[>12172553, PubMed:\\\\\\\\\\\[>12820960, PubMed:\\\\\\\\\\\\[>12842888, PubMed:\\\\\\\\\\\\\[>12906785, PubMed:\\\\\\\\\\\\\\[>15340059, PubMed:\\\\\\\\\\\\\\\[>22819219, PubMed:\\\\\\\\\\\\\\\\[>24529379, PubMed:\\\\\\\\\\\\\\\\\[>33436626\\\\\\\\\\\\\\\\\\). In absence of nutrients, the TSC-TBC complex inhibits mTORC1, thereby preventing phosphorylation of ribosomal protein S6 kinase \\\\\\\\\\\\\\\\\\(RPS6KB1 and RPS6KB2\\\\\\\\\\\\\\\\\\) and EIF4EBP1 \\\\\\\\\\\\\\\\\\(4E-BP1\\\\\\\\\\\\\\\\\\) by the mTORC1 signaling \\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\[>12172553, PubMed:\\\\\\\\\\\\\\\\\\\[>12271141, PubMed:\\\\\\\\\\\\\\\\\\\\[>12842888, PubMed:\\\\\\\\\\\\\\\\\\\\\[>12906785, PubMed:\\\\\\\\\\\\\\\\\\\\\\[>22819219, PubMed:\\\\\\\\\\\\\\\\\\\\\\\[>24529379, PubMed:\\\\\\\\\\\\\\\\\\\\\\\\[>28215400, PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\[>35772404\\\\\\\\\\\\\\\\\\\\\\\\\\). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 \\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\[>12172553, PubMed:\\\\\\\\\\\\\\\\\\\\\\\\\\\[>24529379\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling \\\\\\\\\\\\\\\\\\\\\\\\\\\\(By similarity\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Also stimulates the intrinsic GTPase activity of the Ras- related proteins RAP1A and RAB5 \\\\\\\\\\\\\\\\\\\\\\\\\\\\(By similarity\\\\\\\\\\\\\\\\\\\\\\\\\\\\).\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/24529379\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12172553\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/35772404\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/28215400\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/24529379\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/22819219\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12906785\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12842888\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12271141\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12172553\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/33436626\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/24529379\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/22819219\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\]\\\\\\\\\\\\\\(http://www.uniprot.org/citations/15340059\\\\\\\\\\\\\\)\\\\\\\\\\\\\]\\\\\\\\\\\\\(http://www.uniprot.org/citations/12906785\\\\\\\\\\\\\)\\\\\\\\\\\\]\\\\\\\\\\\\(http://www.uniprot.org/citations/12842888\\\\\\\\\\\\)\\\\\\\\\\\]\\\\\\\\\\\(http://www.uniprot.org/citations/12820960\\\\\\\\\\\)\\\\\\\\\\]\\\\\\\\\\(http://www.uniprot.org/citations/12172553\\\\\\\\\\)\\\\\\\\\]\\\\\\\\\(http://www.uniprot.org/citations/35772404\\\\\\\\\)\\\\\\\\]\\\\\\\\(http://www.uniprot.org/citations/33436626\\\\\\\\)\\\\\\\]\\\\\\\(http://www.uniprot.org/citations/28215400\\\\\\\)\\\\\\]\\\\\\(http://www.uniprot.org/citations/24529379\\\\\\)\\\\\]\\\\\(http://www.uniprot.org/citations/22819219\\\\\)\\\\]\\\\(http://www.uniprot.org/citations/15340059\\\\)\\\]\\\(http://www.uniprot.org/citations/12906785\\\)\\]\\(http://www.uniprot.org/citations/12842888\\)\]\(http://www.uniprot.org/citations/12271141\)](http://www.uniprot.org/citations/12172553)

Cellular Location

Lysosome membrane; Peripheral membrane protein. Cytoplasm, cytosol Note=Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients (PubMed:24529379). In response to insulin signaling and phosphorylation by PKB/AKT1, the complex dissociates from lysosomal membranes and relocates to the cytosol (PubMed:24529379)

Tissue Location

Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta.

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Phospho-Tuberin (S939) Rabbit Monoclonal Antibody - Images