

RHOT1 Antibody
Catalog # ASC11870**Specification**

RHOT1 Antibody - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q8IXI2
Other Accession	NP_001028740 , 75750480
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 76 kDa

Application Notes	Observed: 78 kDa KDa RHOT1 antibody can be used for detection of RHOT1 by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.
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RHOT1 Antibody - Additional Information

Gene ID **55288**

Target/Specificity

RHOT1; RHOT1 antibody is human, mouse and rat reactive. At least three isoforms of RHOT1 are known to exist; this antibody will detect all three isoforms.

Reconstitution & Storage

RHOT1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

RHOT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RHOT1 Antibody - Protein Information

Name RHOT1

Synonyms ARHT1

Function

Atypical mitochondrial nucleoside-triphosphatase (NTPase) involved in mitochondrial trafficking (PubMed:12482879, PubMed:16630562, PubMed:22396657, PubMed:30513825). Probably involved in control of anterograde transport of mitochondria and their subcellular distribution (PubMed:12482879)

target="_blank">12482879, PubMed:16630562, PubMed:22396657). Promotes mitochondrial fission during high calcium conditions (PubMed:27716788). Can hydrolyze GTP, ATP and UTP (PubMed:30513825).

Cellular Location

Mitochondrion outer membrane; Single-pass type IV membrane protein. Note=Colocalizes with MGARP and RHOT2 at the mitochondria

Tissue Location

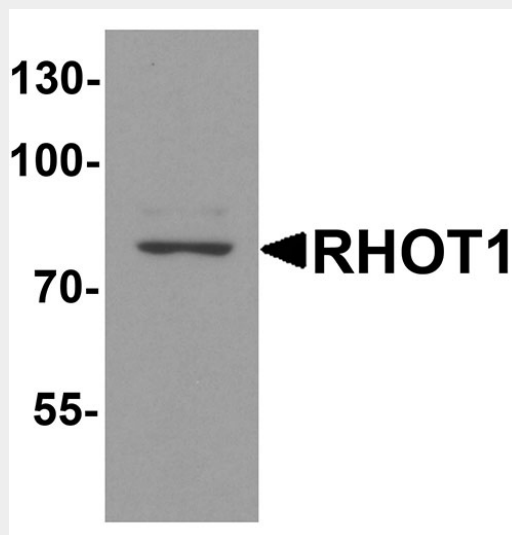
Ubiquitously expressed. Expressed at high level in heart and skeletal muscle.

RHOT1 Antibody - Protocols

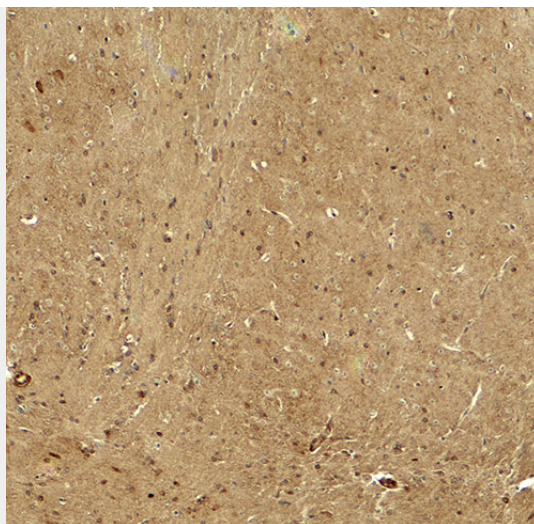
Provided below are standard protocols that you may find useful for product applications.

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

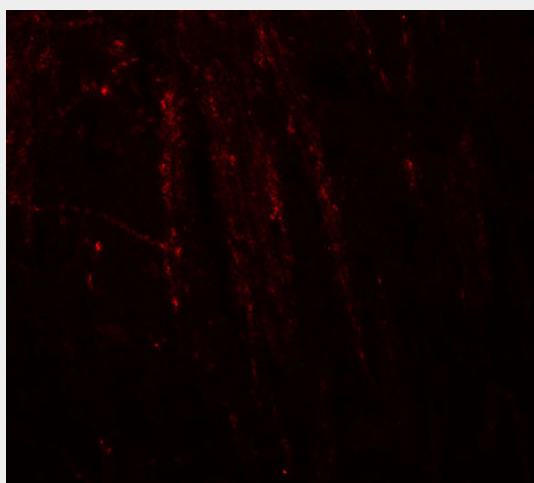
RHOT1 Antibody - Images



Western blot analysis of RHOT1 in rat brain tissue lysate with RHOT1 antibody at 1 µg/ml.



Immunohistochemistry of RHOT in mouse brain tissue with RHOT antibody at 5 µg/ml.



Immunofluorescence of RHOT in mouse brain tissue with RHOT antibody at 20 µg/ml.

RHOT1 Antibody - Background

The Ras homolog family member T1 (RHOT) is an atypical Rho Ca^{2+} -binding GTPase that localizes to the mitochondria (1). RHOT1, the related protein RHOT2, the adaptor protein Milton, and the PTEN induced putative kinase 1 (PINK1), form a complex that is involved in axonal transport of mitochondria (2,3). Both PINK1 and Parkin target RHOT1 for phosphorylation and degradation, causing the arrest of mitochondrial motility (4).

RHOT1 Antibody - References

Fransson A, Ruusala A, and Aspenstrom P. Atypical Rho GTPases have roles in mitochondrial homeostasis and apoptosis. *J. Biol. Chem.* 2003; 278:6495-502.
Macaskill AF, Brickley K, Stephenson FA, et al. GTPase dependent recruitment of Grif-1 by Miro1 regulates mitochondrial trafficking in hippocampal neurons. *Mol. Cell. Neurosci.* 2009;40:301-12.
Weihofen A, Thomas KJ, Ostaszewski B, et al. Pink1 forms a multi-protein complex with Miro and Milton, linking Pink1 function to mitochondrial trafficking. *Biochemistry* 2009; 48:2045-54.
Wang X, Winter D, Ashrafi G, et al. PINK1 and Parkin target Miro for phosphorylation and degradation to arrest mitochondrial motility. *Cell* 2011; 147:893-906.