10320 Camino Santa Fe, Suite G
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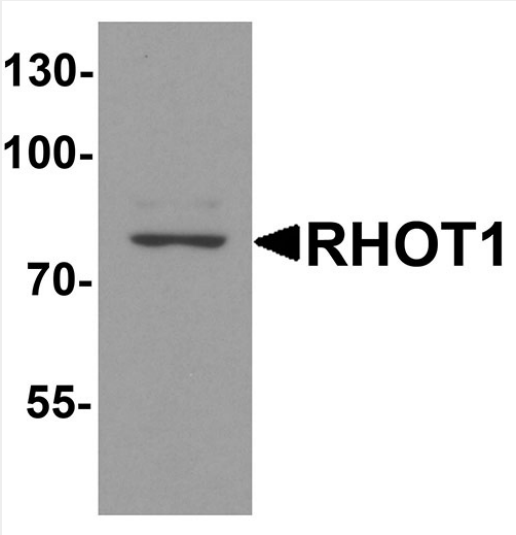
RHOT1 Antibody
Catalog # ASC11870

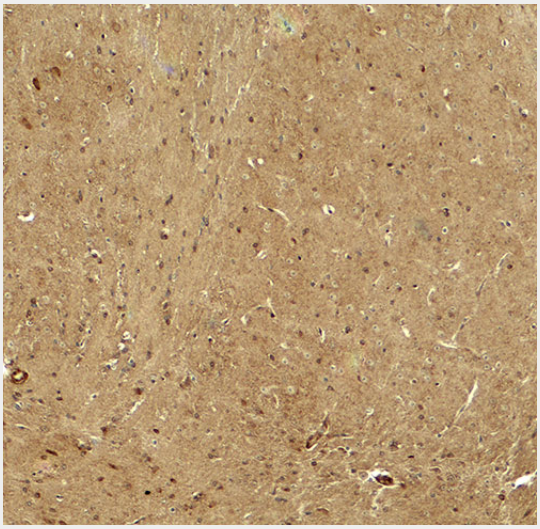
Specification

RHOT1 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	Q8IXI2
Other Accession	NP_001028740, 75750480
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 76 kDa** **Observed: 78 kDa KDa**
Application Notes	**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.**



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.

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℃ for three months and -20℃, stable for up to one year.

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

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RHOT1 Antibody - Protein Information

Name RHOT1

Synonyms ARHT1

Function
Mitochondrial GTPase involved in mitochondrial trafficking (PubMed:12482879, PubMed:16630562, PubMed:22396657). Probably involved in control of anterograde transport of mitochondria and their subcellular distribution (PubMed:12482879, PubMed:16630562, PubMed:22396657).

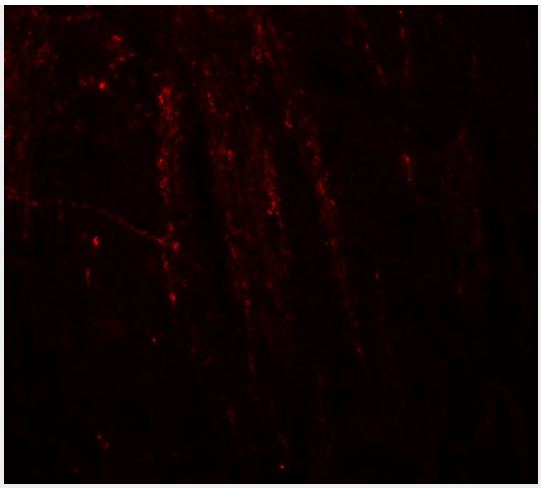
Cellular Location
Mitochondrion outer membrane; Single-pass type IV membrane protein.
Note=Colocalizes with MGARP and RHOT2 at the mitochondria

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 Cytomety
- Cell Culture



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 Ca2+-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.