10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Goat Anti-HAP1 Antibody

Peptide-affinity purified goat antibody

Catalog # AF1520a

Specification

Goat Anti-HAP1 Antibody - Product Information

Application	**WB, E**
Primary Accession	P54257
Other Accession	NP_817084, 9001
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**75506**

Goat Anti-HAP1 Antibody - Additional Information

Gene ID 9001

Other Names
Huntingtin-associated protein 1, HAP-1, Neuroan 1, HAP1, HAP2, HLP1

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-HAP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-HAP1 Antibody - Protein Information

Name HAP1

Synonyms HAP2, HLP1

Function
Originally identified as neuronal protein that specifically associates with HTT/huntingtin and the

binding is enhanced by an expanded polyglutamine repeat within HTT possibly affecting HAP1 interaction properties. Both HTT and HAP1 are involved in intracellular trafficking and HAP1 is proposed to link HTT to motor proteins and/or transport cargos. Seems to play a role in vesicular transport within neurons and axons such as from early endosomes to late endocytic compartments and to promote neurite outgrowth. The vesicular transport function via association with microtubule-dependent transporters can be attenuated by association with mutant HTT. Involved in the axonal transport of BDNF and its activity-dependent secretion; the function seems to involve HTT, DCTN1 and a complex with SORT1. Involved in APP trafficking and seems to facilitate APP anterograde transport and membrane insertion thereby possibly reducing processing into amyloid beta. Involved in delivery of gamma-aminobutyric acid (GABA(A)) receptors to synapses; the function is dependent on kinesin motor protein KIF5 and is disrupted by HTT with expanded polyglutamine repeat. Involved in regulation of autophagosome motility by promoting efficient retrograde axonal transport. Seems to be involved in regulation of membrane receptor recycling and degradation, and respective signal transduction, including GABA(A) receptors, tyrosine kinase receptors, EGFR, IP3 receptor and androgen receptor. Among others suggested to be involved in control of feeding behavior (involving hypothalamic GABA(A) receptors), cerebellar and brainstem development (involving AHI1 and NTRK1/TrkA), postnatal neurogenesis (involving hypothalamic NTRK2/TrkB), and ITPR1/InsP3R1-mediated Ca(2+) release (involving HTT and possibly the effect of mutant HTT). Via association with DCTN1/dynactin p150-glued and HTT/huntingtin involved in cytoplasmic retention of REST in neurons. May be involved in ciliogenesis. Involved in regulation of exocytosis. Seems to be involved in formation of cytoplasmic inclusion bodies (STBs). In case of anomalous expression of TBP, can sequester a subset of TBP into STBs; sequestration is enhanced by an expanded polyglutamine repeat within TBP. HAP1-containing STBs have been proposed to play a protective role against neurodegeneration in Huntigton disease (HD) and spinocerebellar ataxia 17 (SCA17).

Cellular Location
Cytoplasm. Cell projection, axon. Presynapse {ECO:0000250|UniProtKB:P54256}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P54256}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:P54256}. Cell projection, dendrite {ECO:0000250|UniProtKB:P54256}. Lysosome {ECO:0000250|UniProtKB:P54256}. Endoplasmic reticulum {ECO:0000250|UniProtKB:P54256}. Mitochondrion. Nucleus {ECO:0000250|UniProtKB:P54256} Cytoplasmic vesicle, autophagosome {ECO:0000250|UniProtKB:O35668} Early endosome {ECO:0000250|UniProtKB:P54256}. Cell projection, growth cone {ECO:0000250|UniProtKB:P54256}. Cell projection, neuron projection {ECO:0000250|UniProtKB:P54256}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle {ECO:0000250|UniProtKB:P54256}. Note=Localizes to large nonmembrane-bound cytoplasmic bodies found in various types of neurons, called stigmoid bodies (STBs). Localization to neuronal processes and neurite tips is decreased by YWHAZ. In the nucleus localizes to nuclear rods. {ECO:0000250|UniProtKB:P54256}

Tissue Location
Predominantly expressed in brain. Selectively expressed in neurons

Goat Anti-HAP1 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

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

- Cell Culture

Goat Anti-HAP1 Antibody - Images

AF1520a (0.1 µg/ml) staining of Human Brain (Hippocampus) lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-HAP1 Antibody - Background

Huntington's disease (HD), a neurodegenerative disorder characterized by loss of striatal neurons, is caused by an expansion of a polyglutamine tract in the HD protein huntingtin. This gene encodes a protein that interacts with huntingtin, with two cytoskeletal proteins (dynactin and pericentriolar autoantigen protein 1), and with a hepatocyte growth factor-regulated tyrosine kinase substrate. The interactions with cytoskeletal proteins and a kinase substrate suggest a role for this protein in vesicular trafficking or organelle transport. Several alternatively spliced transcript variants encoding different isoforms have been described for this gene.

Goat Anti-HAP1 Antibody - References

Age at onset in Huntington's disease: replication study on the associations of ADORA2A, HAP1 and OGG1. Taherzadeh-Fard E, et al. Neurogenetics, 2010 Oct. PMID 20512606.
Huntingtin-associated protein-1 interacts with pro-brain-derived neurotrophic factor and mediates its transport and release. Wu LL, et al. J Biol Chem, 2010 Feb 19. PMID 19996106.
Huntingtin associated protein 1 and its functions. Wu LL, et al. Cell Adh Migr, 2009 Jan-Mar. PMID 19262167.
Huntingtin regulates RE1-silencing transcription factor/neuron-restrictive silencer factor (REST/NRSF) nuclear trafficking indirectly through a complex with REST/NRSF-interacting LIM domain protein (RILP) and dynactin p150 Glued. Shimojo M. J Biol Chem, 2008 Dec 12. PMID 18922795.
Huntingtin-associated protein-1 is a modifier of the age-at-onset of Huntington's disease. Metzger S, et al. Hum Mol Genet, 2008 Apr 15. PMID 18192679.