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HAP1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57785

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	P54257
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	75506
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HAP1
Epitope Specificity	551-650/671
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4.
SIMILARITY	Contains 1 HAP1 N-terminal domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	9001
Other Names	Huntingtin-associated protein 1, HAP-1, Neuroan 1, HAP1, HAP2, HLP1
Target/Specificity	Predominantly expressed in brain. Selectively expressed in neurons.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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

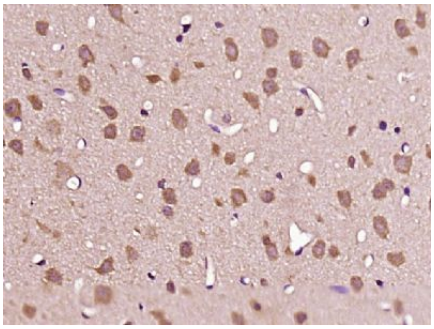
is stable for at least two weeks at 2-4 °C.

Protein Information

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

Images



Paraformaldehyde-fixed, paraffin embedded (rat brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HAP1) Polyclonal Antibody, Unconjugated (AP57785) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.