

Rabbit DTNBP1 Polyclonal Antibody | anti-DTNBP1 antibody

DTNBP1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326284	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

DTNBP1; Polyclonal Antibody; DTNBP1 Antibody; DTBP1_HUMAN; Dysbindin; Dysbindin-1; Dystrobrevin binding protein 1; Dystrobrevin-binding protein 1; Hermansky Pudlak syndrome 7 protein; Hermansky-Pudlak syndrome 7 protein; HPS7; HPS7 protein; anti-DTNBP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	DTNBP1 antibody detects endogenous levels of total DTNBP1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	270
Applicable Applications for anti-DTNBP1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human DTNBP1
Subcellular Location	Cytoplasm. Cytoplasmic Vesicle Membrane. Cytoplasmic Vesicle > Secretory Vesicle > Synaptic Vesicle Membrane. Endosome Membrane. Melanosome Membrane. Nucleus. Cell Junction > Synapse > Postsynaptic Cell Membrane > Postsynaptic Density. Endoplasmic Reticulum. Detected in neuron cell bodies, axons and dendrites. Detected at synapses, at post-synaptic density, at pre-synaptic vesicle membranes and microtubules. Detected at tubulovesicular elements in the vicinity of the golgi apparatus and of melanosomes. Occasionally detected at the membrane of pigmented melanosomes in cultured melanoma cells.
Tissue Specificity	Detected in brain, in neurons and in neuropil. Isoform 1 is expressed in the cerebral cortex, and hippocampal frontal (HF). Specific expression in the posterior half of the superior temporal gyrus (pSTG). Higher expression of isoform 2 and 3 in the HF than in the pSTG while isoform 1 shows no difference in expression in these areas. In the HF, detected in dentate gyrus (DG) and in pyramidal cells of hippocampus CA2 and CA3 (at protein level). Expressed in all principal neuronal populations of the HF, namely pyramidal neurons in the subiculum and CA1-3, granule cells in the dense cell layer of the DG (DGg), and polymorph cells in the hilus of the DG (DGh). Maximal levels in CA2, CA3, and DGh. Isoform 2 not expressed in the cerebral cortex.
Predicted Cross Reactivity	Bovine, Horse
Similarity	Bovine (82%), Horse (82%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of Mouse brain lysate, using DTNBP1 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326284 at 1/100 staining Mouse spleen tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-DTNBP1 antibody

Description: Dysbindin, or dystrobrevin-binding protein 1, is a coiled-coil-containing protein expressed in muscle and brain that was identified as a binding partner of dystrobrevin (1). Dysbindin upregulates expression of the pre-synaptic proteins SNAP25 and synapsin I, thereby increasing glutamate release and promoting neuronal viability through Akt signaling. In particular, Akt phosphorylation is suppressed with downregulation of dysbindin and increased with upregulation of dysbindin (2). A nonsense mutation of dysbindin causes Hermansky-Pudlak disease, an autosomal recessive disorder characterized by lysosomal storage defects and prolonged bleeding. (2). Genetic variation in the gene encoding dysbindin is strongly associated with schizophrenia and protein levels are reduced in the prefrontal cortex, midbrain and hippocampus of brains from patients with schizophrenia (3, 4).

Function: Component of the BLOC-1 complex, a complex that is required for normal biogenesis of lysosome-related organelles (LRO), such as platelet dense granules and melanosomes. In concert with the AP-3 complex, the BLOC-1 complex is required to target membrane protein cargos into vesicles assembled at cell bodies for delivery into neurites and nerve terminals. The BLOC-1 complex, in association with SNARE proteins, is also proposed to be involved in neurite extension. Associates with the BLOC-2 complex to facilitate the transport of TYRP1 independent of AP-3 function. Plays a role in synaptic vesicle trafficking and in neurotransmitter release. Plays a role in the regulation of cell surface exposure of DRD2. May play a role in actin cytoskeleton reorganization and neurite outgrowth. May modulate MAPK8 phosphorylation. Appears to promote neuronal transmission and viability through regulating the expression of SNAP25 and SYN1, modulating PI3-kinase-Akt signaling and influencing glutamatergic release. Regulates the expression of SYN1 through binding to its promoter. Modulates prefrontal cortical activity via the dopamine/D2 pathway.

Subunit Structure: Interacts (via its coiled coil domain) with KXD1. Interacts with CMYA5, PI4K2 and RNF151 (By similarity). Component of the biogenesis of lysosome-related organelles complex 1 (BLOC-1) composed of at least BLOC1S1, BLOC1S2, BLOC1S3, BLOC1S4, BLOC1S5, BLOC1S6, DTNBP1/BLOC1S7 and SNAPIN/BLOC1S8. Interacts directly in the complex with BLOC1S5, BLOC1S6 and SNAPIN/BLOC1S8. The BLOC-1 complex associates with the AP-3 protein complex and membrane protein cargos. This BLOC-1 complex also associates with the BLOC-2 complex in endosomes. Binds to DTNA and DTNB but may not be a physiological binding partner (PubMed:16980328). Interacts (isoform 1 and isoform 2 only) with the DNA-dependent protein kinase complex DNA-PK; the interaction phosphorylates DTNBP1 in vitro. Interacts directly in this complex with XRCC5 and XRCC6. Interacts with AP3M1, AP3B2 and TRIM32. Interacts with XPO1; the interaction exports DTNBP1 out of the nucleus.

Post-translational Modifications: Ubiquitinated by TRIM32. Ubiquitination leads to DTNBP1 degradation. Isoforms 1 and 2 highly phosphorylated by PRKDC in vitro. Isoform 3 only weakly phosphorylated by PRKDC in vitro.

Similarity: Belongs to the dysbindin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	410651504
NCBI GeneID	84062
NCBI Accession #	NP_001258596.1
NCBI GenBank Nucleotide #	NM_001271667.1
UniProt Accession #	Q96EV8; Q5THY3; Q5THY4; Q96NV2; Q9H0U2; Q9H3J5; A8K3V3
Molecular Weight	Observed: 39 kDa Predicted: 40 kDa
NCBI Official Full Name	dysbindin isoform C

NCBI Official Synonym Full Names	dystrobrevin binding protein 1
NCBI Official Symbol	DTNBP1
NCBI Official Synonym Symbols	SDY; DBND; HPS7; My031; BLOC1S8
NCBI Protein Information	dysbindin
UniProt Protein Name	Dysbindin
UniProt Gene Name	DTNBP1
UniProt Synonym Gene Names	BLOC1S8; BLOC-1 subunit 8; HPS7 protein

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/dtnbp1-antibody-immunohistochemistry-western-blot-elisa/326284>