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Dtnbp1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2714a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q91WZ8
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB9243
Calculated MW	39651
Antigen Region	8-38

Additional Information

Gene ID	94245
Other Names	Dysbindin, Biogenesis of lysosome-related organelles complex 1 subunit 8, BLOC-1 subunit 8, Dysbindin-1, Dystrobrevin-binding protein 1, Hermansky-Pudlak syndrome 7 protein homolog, HPS7 protein homolog, Dtnbp1, Bloc1s8, Sdy
Target/Specificity	This Dtnbp1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 8-38 amino acids from the N-terminal region of human Dtnbp1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Dtnbp1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dtnbp1
Synonyms	Bloc1s8, Sdy

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.
Cellular Location	[Isoform 1]: Cytoplasm. Cytoplasmic vesicle membrane; Peripheral membrane protein; Cytoplasmic side. Endosome membrane; Peripheral membrane protein; Cytoplasmic side. Melanosome membrane; Peripheral membrane protein; Cytoplasmic side. Postsynaptic density. Endoplasmic reticulum. Nucleus. Note=Mainly cytoplasmic but shuttles between the cytoplasm and nucleus. Exported out of the nucleus via its NES in a XPO1-dependent manner. Nuclear localization is required for regulation of the expression of genes such as SYN1. Detected in neuron cell bodies, axons and dendrites. Mainly located to the postsynaptic density. 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 (By similarity). The BLOC-1 complex associates with the BLOC-2 complex in early endosome-associated tubules Associated with the AP-3 complex at presynaptic terminals
Tissue Location	Detected in brain, in hippocampus and dentate gyrus neurons. Detected at axon bundles and axon terminals, notably in the cerebellum and hippocampus. Detected in neuropil in hippocampus, lateral septum, basal ganglia and substantia nigra. Highly expressed in pyramidal cells of hippocampus CA2 and CA3. Detected at the heart and skeletal muscle sarcolemma (at protein level). Ubiquitously expressed The highest expression is observed in testis, liver, kidney, brain, heart and lung. Expressed at lower levels in stomach and small intestine.

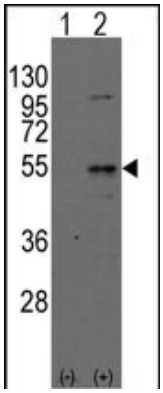
Background

Dtnbp1 may play a role in organelle biogenesis associated with melanosomes, platelet dense granules, and lysosomes. A similar protein in mouse is a component of a protein complex termed biogenesis of lysosome-related organelles complex 1 (BLOC-1), and binds to alpha- and beta-dystrobrevins, which are components of the dystrophin-associated protein complex (DPC). Mutations are associated with Hermansky-Pudlak syndrome type 7. This protein may also be associated with schizophrenia.

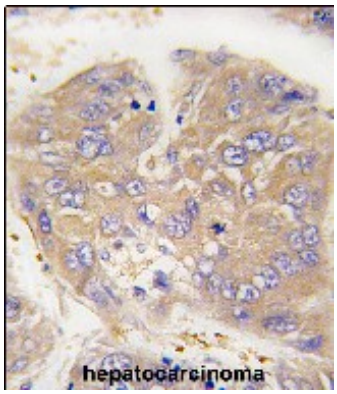
References

Benson M.A.,J. Biol. Chem. 276:24232-24241(2001).
Li W., Nat. Genet. 35:84-89(2003).
Talbot K., Hum. Mol. Genet. 15:3041-3054(2006).

Images



Western blot analysis of Dtnbpt(arrow) using rabbit polyclonal Dysbindin(Dtnbp1) Antibody (N-term) (Cat.#AP2714a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Dtnbpt gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with Dtnbp1 Antibody (N-term) (Cat.#AP2714a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.