COSMO BIO CO., LTD.
Inspiration for Life Science

POLYCLONAL ANTIBODY

For research use only, Not for diagnostic use.

Catalog No. ACC-PA007

Anti Dysbindin-1

Background:

Dysbindin (UniProt: Q96EV8; also known as Biogenesis of lysosome-related organelles complex 1 subunit 8, BLOC-1 subunit 8, Dysbindin-1, Dystrobrevin-binding protein 1, Hermansky-Pudlak syndrome 7 protein, HPS7 protein) is encoded by the DTNBP1 (also known as BLOC1S8, My031) gene (Gene ID: 84062) in human. Dysbindin is a 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. It plays a role in synaptic vesicle trafficking and in neurotransmitter release. 3 isoforms produced by alternative splicing and alternative initiation have been described. Isoform 1 is mainly cytoplasmic, but shuttles between the cytoplasm and nucleus. It is exported out of the nucleus via its nuclear export sequence (NES). Its nuclear localization is required for regulation of the expression of genes, such as SYN1. It is detected in neuron cell bodies, axons and dendrites and is mainly located to the postsynaptic density. Isoform 2 also shuttles between the cytoplasm and nucleus and is mainly expressed in the dendritic spine. It is predominantly a synaptic vesicle isoform but also highly expressed in the nucleus. Isoform 3 is exclusively cytoplasmic and is predominantly found in the postsynaptic density (PSD) with little association with synaptic vesicles. Mutations in DTNBP1 gene have been linked to Hermansky-Pudlak syndrome 7 (HPS7) that is characterized by oculocutaneous albinism, bleeding due to platelet storage pool deficiency, and lysosomal storage defects. Defects in DTNBP1 are associated with susceptibility to schizophrenia.

Applications:	Western Blotting (WB)	: 0.3 µg/ml
	Immunofluorescence (IF)	: 1 µg/ml
	Immunohistochemistry (Paraffin) (IHC (P))	: 1 µg/ml
Specificity:	Dysbindin-1	
Immunogen:	MBP-tagged full length recombinant human Dysbindin.	
Host:	Rabbit	
Reactivity:	Human, Mouse, Rat	
Clonality:	Polyclonal	
Subclass:	IgG	
Purification method:	Affinity purified	
Form:	Liquid (0.1M NaPB, pH7.0, 20mg/ml BSA, 0.1% Sodium Azide (NaN_3) added)	
Conjugation:	None	
Volume:	50 µg (1 mg/ml)	
Storage condition:	-20°C	

References:

Ito H, Morishita R, Shinoda T, Iwamoto I, Sudo K, Okamoto K, Nagata KI. (2010) Dysbindin-1, WAVE2 and Abi-1 form a complex that regulates dendritic spine formation. *Mol Psychiatry* **15**:976-986. PMID: 20531346

Ito H, Morishita R, Nagata K. (2016) Schizophrenia susceptibility gene product dysbindin-1 regulates the homeostasis of cyclin D1. *Biochim Biophys Acta.* **1862**: 1383-1391. PMID: 27130439

Example Assay Data:

1. Immunohistochemistry for formalin/PFA-fixed paraffin embedded sections

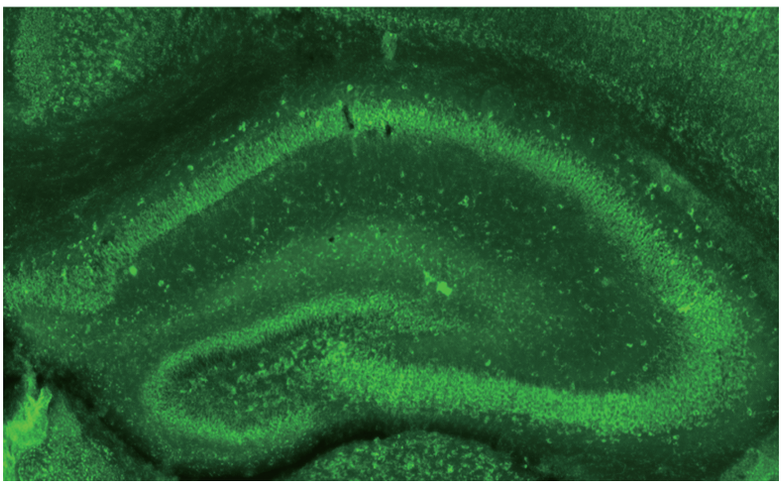

Figure 1. IHC (P) result of Anti Dysbindin-1 antibody

2. Western Blotting

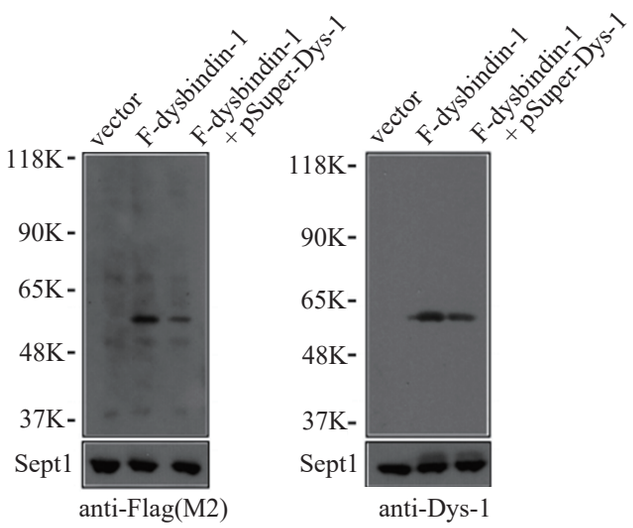

Figure 2. Western Blotting results of Anti Dysbindin-1 antibody

For research use only, Not for diagnostic use.

COSMO BIO CO., LTD.

【JAPAN】
TOYO EKIMAE BLDG. 2-20, TOYO 2-CHOME,
KOTO-KU. TOKYO 135-0016, JAPAN
Phone: +81-3-5632-9610
FAX: +81-3-5632-9619
URL: https://www.cosmobio.co.jp/

COSMO BIO USA

【Outside Japan】
2792 Loker Ave West, Suite 101
Carlsbad, CA 92010, USA
email: info@cosmobiousa.com
Phone/FAX: (+1) 760-431-4600
URL: www.cosmobiousa.com