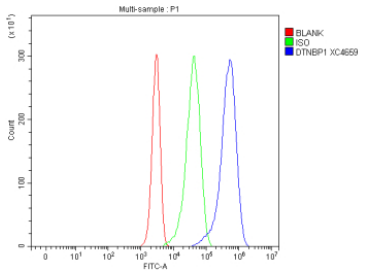
DTNBP1 Antibody / Dysbindin (FY12830)

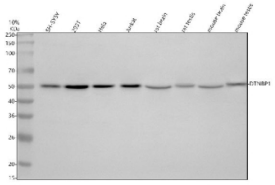
Catalog No.	Formulation	Size
FY12830	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q96EV8
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This DTNBP1 antibody is available for research use only.



Flow Cytometry analysis of Jurkat cells using anti-DTNBP1 antibody. Overlay histogram showing Jurkat cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-DTNBP1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of Dysbindin/DTNBP1 using anti-DTNBP1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human SHSY-5Y whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat testis tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse testis tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-DTNBP1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. DTNBP1 western blot across human and rodent lysates shows a single major band near ~50 kDa, consistent with full-length Dysbindin-1 migrating above its predicted ~39 kDa due to post-translational modification and acidic domain-dependent electrophoretic retardation.

Description

DTNBP1 antibody detects Dystrobrevin-binding protein 1 (commonly known as Dysbindin), a cytoplasmic protein involved in vesicle trafficking, synaptic function, and organelle biogenesis. Encoded by the DTNBP1 gene on chromosome 6p22.3, this protein is a core component of the biogenesis of lysosome-related organelles complex 1 (BLOC-1). Through its scaffolding and trafficking functions, Dysbindin regulates endosomal transport, melanosome formation, and neurotransmitter release, particularly within neuronal and pigment cells.

Dysbindin interacts with other BLOC-1 subunits, including SNAPIN, MUTED, and BLOC1S proteins, coordinating actin-based vesicular transport. In neurons, it contributes to synaptic vesicle recycling and glutamatergic signaling, influencing synaptic plasticity and cognitive processes. Dysbindin localizes to endosomes and synaptic vesicles, reflecting its role in membrane trafficking and receptor recycling.

The DTNBP1 antibody is widely used in neuroscience, cell biology, and genetic disease research to examine endosomal transport, synaptic vesicle dynamics, and intracellular trafficking. Western blot analysis identifies a 40 kilodalton band corresponding to Dysbindin, while immunofluorescence shows punctate cytoplasmic staining consistent with endosomal localization. This antibody supports investigations into molecular mechanisms of vesicle regulation and neurotransmission.

Loss-of-function mutations or reduced expression of DTNBP1 have been associated with Hermansky-Pudlak syndrome type 7 and susceptibility to schizophrenia, linking Dysbindin to synaptic homeostasis and neurodevelopment. Dysbindin also influences muscle membrane stability by binding to dystrobrevins. The DTNBP1 antibody provides a dependable reagent for exploring vesicle trafficking, neurological function, and genetic disorders. NSJ Bioreagents validates this antibody for its applications, ensuring reproducible detection in cellular and neurological research.

Application Notes

Optimal dilution of the DTNBP1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human Dysbindin/DTNBP1 recombinant protein (Position: M1-S351) was used as the immunogen for the DTNBP1 antibody.

Storage

After reconstitution, the DTNBP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.