

DTNB Antibody / Dystrobrevin beta (FY12628)

Catalog No.	Formulation	Size
FY12628	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
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	O60941
Applications	Western Blot: 0.25-0.5ug/ml Flow Cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This DTNB antibody is available for research use only.

Description

DTNB antibody detects Dystrobrevin beta, a cytoplasmic scaffolding protein that associates with dystrophin and syntrophin complexes at the plasma membrane. DTNB participates in maintaining membrane stability, signal transduction, and cytoskeletal anchoring in muscle and neuronal tissues. The DTNB antibody is widely used in muscle biology, neuroscience, and membrane research to study dystrophin-associated complexes and neuromuscular organization.

DTNB is encoded by the DTNB gene located on human chromosome 2p16.2. The protein is approximately 628 amino acids in length and shares structural similarity with dystrobrevin alpha. DTNB localizes to the cytoplasmic face of the sarcolemma and interacts with dystrophin, syntrophins, and other adaptor proteins within the dystrophin-glycoprotein complex (DGC), which links the cytoskeleton to the extracellular matrix.

The DTNB antibody detects a 70 kilodalton protein by western blot and reveals sarcolemmal and cytoplasmic localization under immunofluorescence microscopy. In skeletal muscle, DTNB contributes to stabilization of muscle fibers and transmission of mechanical force. In neurons, it participates in postsynaptic density organization and signal transduction, influencing synaptic plasticity and neurotransmission.

Dysfunction or loss of DTNB disrupts DGC integrity, leading to impaired muscle contractility and signaling abnormalities. Variants in DTNB have been associated with neuromuscular diseases, cognitive deficits, and cardiomyopathy. Through its scaffolding functions, DTNB regulates localization of signaling molecules such as nitric oxide synthase and kinases involved in muscle adaptation.

Because of its role in linking the cytoskeleton to membrane signaling complexes, DTNB provides insights into muscular dystrophy mechanisms and synaptic organization. NSJ Bioreagents provides a validated DTNB antibody optimized for western blot, immunohistochemistry, and confocal imaging, supporting research into muscle integrity, neuronal communication, and cytoskeletal scaffolding.

Application Notes

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

Immunogen

E.coli-derived human DTNB recombinant protein (Position: M1-G627) was used as the immunogen for the DTNB antibody.

Storage

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