3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

# Product Information

**Anti-Dystrobrevin-β**
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200288**

## Product Description

Anti-Dystrobrevin-β is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence located near the N-terminus of human dystrobrevin-β (DTNB) (GeneID 1838), conjugated to KLH. The corresponding sequence is identical in human DTNB isoforms 1-5, and highly conserved (single amino acid substitution) in rat and mouse DTNB. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Dystrobrevin-β specifically recognizes human and rat dystrobrevin-β. The antibody can be used in several immunochemical techniques including immunoblotting (~72 kDa), immunofluorescence, immunoprecipitation and immunohistochemistry. Detection of the dystrobrevin-β band by immunoblotting is specifically inhibited by the dystrobrevin-β immunizing peptide.

Dystrobrevin-β (also known as DTNB) belongs to the dystrobrevin (DB) subfamily of the dystrophin family. Dystrobrevin is a component of the dystrophin-glycoprotein complex (DGC) that is located at the muscle sarcolemma and forms a transmembrane link between the cytoskeleton and the basal lamina.[1,2] The DGC consists of dystrophin and several integral and peripheral membrane proteins, including dystroglycans, sarcoglycans, syntrophins and dystrobrevins. DGC disruption is associated with various forms of muscular dystrophy, including Duchenne and Becker muscular dystrophies (DMD and BMD). In mammalian cells, the DB family includes two isoforms, α- and β-DB, encoded by different genes. Alternative splicing of β-DB mRNA gives rise to at least five isoforms that may differ in sequence and tissue distribution.[2,3] β-DB is restricted to non-muscle tissues, being most abundantly expressed in kidney and brain.[4-6] In brain β-DB associates with dystrophin and syntrophin isoforms in the cortex, hippocampus and Purkinje cells, and is highly enriched in post-synaptic densities (PSDs). β-DB associates with neuronal kinesin heavy chain Kif5A and Kif5B in the brain, suggesting a role for β-DB as a motor protein receptor involved in the transport of DGC components to specific sites in the cell.[7]

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

## Product Profile

Immunoblotting: a working concentration of 1.5-3.0 μg/mL is recommended using lysates of HEK-293T cells over-expressing human dystrobrevin-β.

Immunoprecipitation: a working amount of 15-30 μg is recommended using HEK-293T cells over-expressing human dystrobrevin-β.

Immunofluorescence: a working concentration of 2-4 μg/mL is recommended using HEK-293T cells over-expressing human dystrobrevin-β.

Immunohistochemistry: a working concentration of 20-40 μg/mL is recommended using formalin-fixed, paraffin-embedded rat kidney.

**Note**: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

**References**


1. Blake, D.J., et al., *Physiol. Rev.*, **82**, 291-329 (2002).
2. Haenggi, T., and Fritschy, J.M., *Cell. Mol. Life Sci.*, **63**, 1614-1631 (2006).
3. Rees, M.L., et al., *Neuromuscul. Disord.,* **17**, 123-134 (2007).
4. Blake, D.J., et al., *J. Cell Biol.*, **147**, 645-657 (1999).
5. Loh, N.Y., et al., *J. Cell Sci.*, **113**, 2715-2724 (2000).
6. Loh, N.Y., et al., *Mol. Cell. Biol.*, **21**, 7442-7448 (2001).
7. Macioce, P., et al., *J. Cell Sci.*, **116**, 4847-4856 (2003).


ER,TD,KAA,PHC 06/11-1


Sigma brand products are sold through Sigma-Aldrich, Inc.
Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.