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Spectrin Beta-III Monoclonal Mouse Antibody (SPTBN2/1247)

Product Description

Spectrin is an actin binding protein that is a major component of the plasma membrane skeleton. Spectrins function as membrane organizers and stabilizers by forming dimers, tetramers and higher polymers. Vertebrate spectrins have two alpha-subunits (alpha-I/alpha-II), four beta-subunits (beta-I-beta-IV) and a beta-H subunit creating diversity and specialization of function. Spectrin alpha and spectrin beta are present in erythrocytes, whereas spectrin alpha II (also designated fodrin alpha) and spectrin beta I (also designated fodrin beta) are present in other somatic cells. The spectrin tetramers in erythrocytes act as barriers to lateral diffusion, but spectrin dimers seem to lack this function. Spectrin beta III is highly homologous to both spectrin beta I and spectrin beta II. Spectrin beta III is highly expressed in brain, kidney, pancreas and liver, and at lower levels in lung and placenta. Spectrin beta 3 is primarily expressed in nervous tissues with highest expression levels in the cerebellum, where it is found in Purkinje cell soma and dendrites.

Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the CF® Dye Brochure for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors.

Stock status: Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email order@biotium.com to inquire about stock status and lead times before placing your order.

Catalog number key for antibody number 1247, Anti-Spectrin Beta-III (SPTBN2/1247)

Product attributes

Antibody number	#1247
Antibody reactivity (target)	Spectrin Beta-III
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	SPTBN2/1247
Isotype	IgG3
Molecular weight	246 kDa
Synonyms	Beta III spectrin; SCA5; Spectrin beta chain brain 2; Spectrin beta non-erythrocytic 2; Spectrin non-erythroid beta chain 2; Spinocerebellar ataxia 5; SPTBN2
Human gene symbol	SPTBN2
Entrez gene ID	6712
SwissProt	O15020
Unigene	26915
Immunogen	Recombinant human SPTBN2 fragment (aa356-475) (exact sequence is proprietary)
Antibody target cellular localization	Cytoskeleton
Species reactivity	Human, Mouse, Rat
Antibody application notes	For coating for ELISA, order Ab without BSA, Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody, Optimal dilution and staining procedure for a specific application should be determined by user, Recommended starting concentrations for titration are 1-2 ug/mL for most applications, or 1 ug/million cells/100 uL for flow cytometry
Positive control	HeLa cells. Pancreas or Liver.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Antibody/conjugate formulation	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide
Antibody research areas	Cytoskeleton
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	CF®405S Features
BNC88	CF®488A	490/515	488	GFP, FITC	CF®488A Features
BNC68	CF®568	562/583	532, 561	RFP, TRITC	CF®568 Features
BNC94	CF®594	593/614	561	Texas Red®	CF®594 Features
BNC40	CF®640R	642/662	633-640	Cy®5	CF®640R Features
BNC47	CF®647	650/665	633-640	Cy®5	CF®647 Features
BNC74	CF®740	742/767	633-685	775/50	CF®740 Features
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified, BSA-free	N/A	N/A	N/A	

References

Speicher, D.W. 1986. The present status of erythrocyte spectrin structure: the 106-residue repetitive structure is a basic feature of an entire class of proteins. J. Cell. Biochem. 30: 245-258.

Coelman, T.R., et al. J.S. 1989. Functional diversity among spectrin isoforms. Cell Motil. Cytoskeleton 12: 225-247.