

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human beta-III Spectrin in direct ELISAs and Western blots.
Source	Monoclonal Rabbit IgG Clone # 1287A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Synthetic peptide containing the C-terminal region of beta-III Spectrin Accession # NP_008877.1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Spectrin beta-III (SPTBN2) belongs to spectrins family of proteins which are essential to mechanical support/structural membrane integrity maintenance in erythrocytes, stabilizing cell-cell contacts, and localizing ion channels as well as cell adhesion molecules within specific subdomains of plasma membranes. 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 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. Spectrin beta-III interacts with EAAT4, the glutamate transporter predominately expressed in Purkinje cells, and stabilizes it at the plasma membrane leading to glutamate clearance from the synaptic cleft, and resulting in both modulation of glutamatergic neurotransmission as well as prevention of glutamate-mediated neurotoxicity.

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