

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Endophilin B1/Bif-1 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant human Endophilin B2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 807009
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Endophilin B1/Bif-1 Ala33-Asn189 Accession # Q9Y371
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

Endophilins are among the best known BAR (Bin/Amphiphysin/Rvs) domain proteins. The highly conserved protein dimerisation domain is typically involved in membrane dynamics. Endophilin-B1, also known as SH3GLB1 (Src-Homology 3 Domain-containing GRB2-like protein B1) and BIF-1, is a 40 kDa protein that belongs to the endophilin family of molecules. It is a cytoplasmic and Golgi membrane protein that is expressed in neurons, striated (skeletal and cardiac) muscle cells, and placenta. Using SH3GLB1 in yeast two-hybrid screens, a second protein, SH3GLB2 (endophilin B2), was identified as an interacting partner. Endophilin-B1 plays a role in cell homeostasis. In neurons, Endophilin-B1 is phosphorylated by Cdk5, inducing homodimerization and autophagosome formation. In addition, it appears to play a role in the maintenance of mitochondrial integrity. Endophilin-B1 appears to cycle on-and-off the outer mitochondrial membrane (OMM), contributing to OMM integrity. And after the initiation of endocytosis, it also directs EEA1+ TrkA-containing endosomes back into the cell membrane for reuse. Human Endophilin-B1 is 365 amino acids (aa) in length. It possesses an N-terminal lipid-binding BAR (Bin/Amphiphysin/Rvs) domain (aa 27-261) that contains an internal coiled-coil region, and a C-terminal SH3 domain that binds Pro-rich sequences on potential ligands (309-363). There are at least three potential splice variants for Endophilin-B1. Two are 42 and 43 kDa in size, and possess a 21 and 29 aa insertion after Ser190, respectively. A third potentially utilizes an alternative start site at Met101. Over aa 33-189, human Endophilin-B1 shares 98% aa sequence identity with mouse Endophilin-B1.

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