

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Neuronal Pentraxin R/NPTXR
Source	Monoclonal Mouse IgG _{2B} Clone # 511527
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human Neuronal Pentraxin R/NPTXR Ala24-Ala500 Accession # O95502
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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.
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

The Neuronal Pentraxin Receptor (NPTXR; also called NPR) is a 55-65 kDa, type II transmembrane glycoprotein within the Pentraxin family. NPTXR is co-expressed and forms heteromultimers with the related, secreted proteins NPTX1 and NPTX2/NARP (1, 2). Human NPTXR is a 500 amino acid (aa) protein that includes a 477 aa extracellular domain (ECD) with one calcium-binding Pentraxin domain. The human NPTXR ECD shares 88% and 89% aa sequence identity with mouse and rat NPTXR, respectively. A 62 kDa soluble form is generated by TACE/ADAM17 proteolytic cleavage C-terminal to the transmembrane segment (3). Soluble forms of 55 kDa and 45 kDa have also been reported (2, 3). NPTXR is expressed on cerebellar Purkinje and granule cells, and hippocampal neurons of the CA1, CA3 and dentate gyrus regions (1). It is enriched on axonal membranes at excitatory synapses where, with NPTX1, it recruits the GluR4 subunit of AMPA-type glutamate receptors (AMPA) to promote synaptogenesis (3, 4). Synaptic activity stimulates mGluR1 or mGluR5 receptors, which then activate TACE, causing release of the NPTXR heteromultimer complex from the membrane (3). NPTX1/2 within the complex mediate binding AMPAR, while the soluble (but not transmembrane) form of NPTXR within the complex mediates AMPAR endocytosis and mGluR1/5-mediated long-term depression (3). NPTXR is reported to be increased in cerebrospinal fluid or serum of Alzheimer's disease patients as compared to controls (5). Aberrant expression of transmembrane NPTXR has also been reported in small-cell lung cancers (SCLC; 6).

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