

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Neurogranin in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 2761B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Neurogranin Met1-Asp78 Accession # Q92686
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.

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

NRGN (Neurogranin/Ng; also known as RC3, p17 and BICKS) is a member of the neurogranin family of proteins. Although its predicted MW is 7.5 kDa, it runs anomalously at 15-19 kDa in SDS-PAGE. This is apparently due to the adoption of a rigid α -helical structure in a negatively charged medium. NRGN has limited expression, being found principally in excitatory neurons of the telencephalon, Golgi and Purkinje cells of the cerebellum, and platelets plus B and T cells in non-nervous tissue. Intracellularly, NRGN is found associated with membranes of the ER, Golgi and mitochondria. This association is often in the form of aggregates (or granules), thus giving rise to its name ("neuro-granules"). NRGN is also found in the nucleus and associated with the postsynaptic spines of dendrites. The principal function of NRGN appears to be the binding, sequestration and concentration of CaM (Calmodulin; a Ca-binding protein) in dendritic spines. Following NMDAR activation, Ca diffuses into the synaptic area, resulting in 1) the simple dissociation of CaM from NRGN, or 2) the phosphorylation of NRGN followed by its dissociation from CaM. In either case, the freed CaM is now available to activate multiple downstream signaling pathways, some involved in LTP (or memory). Human NRGN is 78 amino acids (aa) in length. It contains one IQ domain (aa 26-47) that binds CaM, and a collagen-like region at the C-terminus (aa 48-78). Regulatory phosphorylation occurs on Ser36, and the N-terminal Met is acetylated. Full-length human NRGN shares 96% aa sequence identity with both mouse and rat NRGN.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.