

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NPRC/NPR3 in direct ELISA.
Source	Monoclonal Mouse IgG Clone # 1060839
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell, HEK293-derived human NPRC/NPR3 Met1-Glu481 Accession # P17342
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.

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

Atrial Natriuretic Peptide Receptor-3 (NPR3), also known as NPRC or ANPR-C, is one of the three natriuretic peptide receptors (1, 2). Mature human NPR3 is a type I transmembrane glycoprotein that contains a 455 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 37 aa cytoplasmic region. Within the ECD, human NPR3 shares 92% aa sequence identity with mouse and rat NPR3. The natriuretic system is key to the maintenance of vascular tone and cardiovascular homeostasis. It consists of three related natriuretic peptides: atrial natriuretic peptide (ANP), brain natriuretic peptide (BNP), and C-type natriuretic peptide (CNP). It also consists of three single-membrane-spanning receptors (NPRs) to mediate the biological activity of these peptides: NPR1, NPR2, and NPR3. NPR1 and NPR2 are guanylyl cyclase receptors that regulate cGMP levels, while NPR3 lacks enzymatic activity and may act as a clearance receptor (1, 2). Both ANP and BNP exhibit high binding affinities to NPR1 and NPR3, while CNP binds with high affinity to NPR2 and NPR3 (2). NPR3 is known to be expressed in the heart, lung, adrenal gland, heart, cerebral cortex, cerebellum, liver and adipocytes and in some cancers (1, 2). Osteocrin was found to be a specific ligand to NPR3 (3). NPR3 is necessary for Osteocrin to regulate femoral, tibial, and metatarsal bone elongation (4).

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.