biotechne

Human NPRB/NPR2 Antibody

Monoclonal Mouse IgG_{2A} Clone # 1060722 Catalog Number: MAB9725

RDsystems

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human NPRB/NPR2 in direct ELISA.	
Source	Monoclonal Mouse IgG _{2A} Clone # 1060722	
Purification	Protein A or G purified from cell culture supernatant	
Immunogen	Mouse myeloma cell line, NS0-derived human NPRB/NPR2 Arg23-Ile458 Accession # P20594	
Formulation	Dn Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.	

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.

	Concentration	Sample
Flow Cytometry	0.25 μg/10 ⁶ cells	HEK293 cells transfected with Human NPR2 and eGFP

DATA		
Flow Cytometry	Detection of NPRB/NPR2 in HEK293 cells transfected with Human NPR2 and eGFP by Flow Cytometry. HEK293 cells transfected with Human NPR2 and eGFP were stained with either (A) Mouse Anti-Human NPRB/NPR2 Monoclonal Antibody (Catalog # MAB0725) or (B) Mouse IgG _{2A} Isotype Control (Catalog # MAB003) followed by Allophycocyanin-conjugated Anti- Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membrane- associated Proteins.	
PREPARATION AND S	STORAGE	
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C	
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month. 2 to 8 °C under sterile conditions after reconstitution. 	

BACKGROUND

Human Natriuretic Peptide Receptor-2 (NPR2), also known as NPRB, ANP-RB or guanylyl Cyclase-B, is a member of the guanylyl cyclase family of proteins. NPR2 is a type I transmembrane glycoprotein that contains a 436 amino acid extracellular domain (ECD) (aa 23-458) for ligand binding, and a 569 amino acid cytoplasmic domain that contains both a protein kinase domain and a carboxyl-terminal guanylate cyclase domain. NPR2 is expressed most highly in in bone, brain, fibroblasts, heart, kidney, liver, lung, uterine, and vascular smooth muscle tissue (1). NPR2 operates as an oligomer and binds both ANP (atrial natriuretic peptide) and BNP (B type natriuretic peptide), and NPR2 is the principal receptor of CNP (C type natriuretic peptide) (1, 2). Ligand binding to the extracellular ligand binding domain, plus ATP to the intracellular kinase domain activates a cytoplasmic guanylate cyclase (2). NPR2 pathway play a critical role in regulation of skeletal growth (3), and patients with single defect NPR2 alleles are statistically shorter than the average population (4). Over the extracellular domain, human NPR2 is 97% and 96% identical to mouse and rat NPR2, respectively.

6 months, -20 to -70 °C under sterile conditions after reconstitution.

References:

- 1. Potter, L.R. et al. (2009) Handb Exp Pharmacol 191:341.
- 2. Chang, M.S. et al. (1989) Nature 341:68.
- 3. Tsuji, T. and Kunieda T. (2005) J Biol Chem 280:14288.
- 4. Olney, R.C. et al. (2006) J Clin Endocrinol Metab 91:1229.

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