

DESCRIPTION

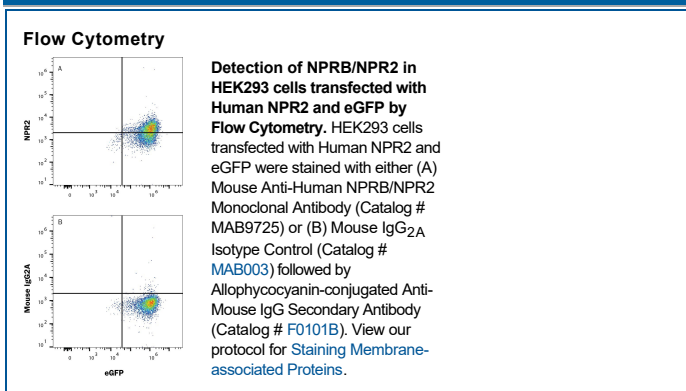
Species Reactivity	Human
Specificity	Detects human NPRB/NPR2 in direct ELISA.
Source	Monoclonal Mouse IgG _{2A} Clone # 1060722
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human NPRB/NPR2 Arg23-Ile458 Accession # P20594
Formulation	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.

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

DATA



PREPARATION AND 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. 6 months, -20 to -70 °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 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.

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.