Recombinant Human NPTX2 protein (His Tag)

Catalog Number: PDMH100071

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

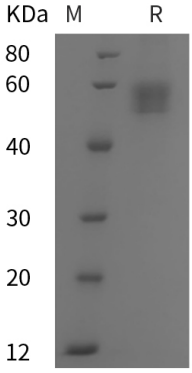
Description

Species	Human
Source	HEK293 Cells-derived Human NPTX2 protein Met1-Leu431, with an C-terminal His
Calculated MW	47.3 kDa
Observed MW	58 kDa
Accession	P47972
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Neuronal Pentraxin (NPTX2), also called NP2 or NARP (neuronal activity-regulated pentraxin) is a 46-60 kDa secreted glycoprotein within the Pentraxin family. Neuronal pentraxins include NPTX1 and NPTX2, both secreted proteins, and NPTXR (Neuronal Pentraxin Receptor), which is found in type II transmembrane or cleaved, soluble forms. Circulating NPTX2 forms disulfide-linked 250 kDa homopentamers, while at excitatory synapses it can form heteropentamers and larger clusters with NPTX1 and NPTXR. The clusters promote synaptogenesis by recruiting subunits of AMPA-type glutamate receptors (AMPAR). Of the three neuronal pentraxins, only NPTX2 shows immediate-early expression induced by synaptic activity. Human NPTX2 is synthesized as a 431 amino acid (aa) protein with a 15 aa signal sequence and a 416 aa secreted mature protein that contains a calcium binding Pentraxin domain. Mature human NPTX2 shares 96% aa sequence identity with mouse, rat, bovine, and canine NPTX2. Unlike other neuronal pentraxins, NPTX2 expression is not limited to neurons and NPTX2 protein is detected in the plasma. It is prominent in the hippocampus, cerebral cortex, cerebellum, hypothalamus, posterior pituitary, and retina. It is found at excitatory synapses in parvalbumin-expressing interneurons and vasopressin-and orexin-expressing hypothalamic neurons. Its expression is increased in the substantia nigra in Parkinson's disease, and it is present in Lewy bodies. NPTX2 shows calcium-dependent adhesion. It promotes axon outgrowth in cortical explants, and formation, maturation and plasticity of synapses in vivo.

Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web:www.elabscience.com
Email:techsupport@elabscience.com