

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Ala22-Gly271 & Arg107-Gly271, both with a C-terminal 6-His tag
Accession # Q63366

N-terminal Sequence Analysis Ala22 & Arg107

Predicted Molecular Mass 19 kDa & 29.4 kDa

SPECIFICATIONS

SDS-PAGE 27-30 kDa and 42-50 kDa, reducing conditions

Activity Measured in a competitive binding assay.
When rrNeurexin-1 α (Catalog # 4485-NX) is immobilized at 1 μ g/mL (100 μ L/well), rrNeurexophilin-1 inhibits 50% binding of biotinylated rrNeurexophilin-1 (1 μ g/mL) at the concentration range of 1-3 μ g/mL.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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

BACKGROUND

Neurexophilin-1 (NXPH-1) is one of at least four vertebrate neuropeptide-like secreted glycoproteins in the neurexophilin family (1, 2). The 29 kDa, 271 amino acid (aa) NXPH-1 sequence contains a 22 aa signal peptide, a 94 aa propeptide that is cleaved at a basic motif, and a 115 aa mature protein that contains three potential N-glycosylation sites in the N-terminal portion and six conserved cysteines in the C-terminal portion (1). Mature rat NXPH-1 shares 99%, 99%, 99%, 96% and 84% aa identity with mouse, human, bovine, opossum and zebrafish NXPH-1, respectively. NXPH-1 is expressed selectively in subpopulations of neurons within the cerebral cortex, cerebellum and olfactory bulb that are thought likely to be inhibitory interneurons (2, 3). NXPH-3 is the neurexophilin most similar to NXPH-1, sharing 69% aa identity within the mature region. Expression of NXPH-1 and NXPH-3 does not appear to coincide, but both are tightly bound extracellular ligands of α -neurexins, synaptic transmembrane molecules that are essential for calcium-triggered neurotransmitter release (1, 4, 5). Genetic deletion of NXPH-1 and/or NXPH-3 produces no anatomical effect, although mice lacking NXPH-3 show defects in motor coordination (4, 6). Of the other known neurexophilins, NXPH-2 is not expressed in rodents, and NXPH-4 does not bind α -neurexins (1, 4).

References:

1. Missler, M. and T. C. Sudhof (1998) J. Neurosci. **18**:3630.
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3. Clarris, H. J. *et al.* (2002) Int. J. Dev. Biol. **46**:649.
4. Missler, M. *et al.* (1998) J. Biol. Chem. **273**:34716.
5. Dudanova, I. *et al.* (2006) J. Neurosci. **26**:10599.
6. Beglopoulos, V. *et al.* (2005) Mol. Cell. Biol. **25**:7278.