Recombinant Mouse Netrin-4

Catalog Number: 1132-N4

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Leu19-Val628 & Ala26-Val628, both with a C-terminal 10-His tag Accession # Q9JI33
N-terminal Sequence Analysis	Leu19 & Ala26
Predicted Molecular Mass	69 kDa

SPECIFICATIONS

SDS-PAGE	85 kDa, reducing conditions
Activity	Measured by its ability to bind rrUNC5H2/Fc Chimera in a functional ELISA. Immobilized rrUNC5H2/Fc Chimera at 5 µg/mL (100 µL/well) can bind rmNetrin-4 with a linear range of 6-400 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>80%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
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

Netrins/UNC-6 (netr: Sanskrit for “one who guides”) are a family of laminin-related small proteins that are involved in neurite outgrowth and axon guidance. Netrins binds to the DCC and UNC5 family of receptors to attract or repel axons. Mouse Netrin-4, also known as β-Netrin, is synthesized as a 629 amino acid (aa) precursor that contains a 19 aa signal sequence, a 428 aalaminin-related region containing an N-terminal laminin globular domain (domain VI) followed by 3 laminin EGF-like repeats, and a 182 aa C domain rich in basic aa residues that serves as a heparin binding site. Netrin-4 has been reported to exist as both a monomer and a dimer. The dimeric form was reported to be the less active of the two. Mouse Netrin-4 shares 31%, 29% and 25% aa sequence identity with mouse Netrin-1, -3, and -G1a, respectively. It also shares 89% aa sequence identity with human Netrin-4. Netrin-4 has widespread expression, occurring in nervous tissues such as embryonic floor plate and postnatal neurons such as cerebellar granule cells and hippocampal pyramidal cells. It also is found in non-neural tissues such as adult Bowman’s capsule and medullary tubular epithelium in kidney, and embryonic pancreatic and intestinal epithelium, plus cells of the ureteric bud. Netrin-4 expression is often associated with basement membrane. Netrin-4 has been shown to initiate axon outgrowth from olfactory bulb explants (1 - 7).

References:

1. McFarlane, S. (2000) Biochem. Cell. Biol. **78**:563.
2. Kennedy, T.E. (2000) Biochem. Cell Biol. **78**:569.
3. Yu, T.W. and C.I. Bargmann (2001) Nature Neurosci. **4**(Suppl):1169.
4. Stein, E. *et al.* (2001) Science **291**:1976.
5. Koch, M. *et al.* (2000) J. Cell Biol. **151**:221.
6. Yin, Y. *et al.* (2000) Mech. Dev. **96**:115.
7. Livesey, F.J. (1999) Cell. Mol. Life Sci. **56**:62.

PRODUCT SPECIFIC NOTICES

This product or the use of this product is covered by U.S. Patents owned by The Regents of the University of California. This product is for research use only and is not to be used for commercial purposes. Use of this product to produce products for sale or for diagnostic, therapeutic or drug discovery purposes is prohibited. In order to obtain a license to use this product for such purposes, contact The Regents of the University of California.

U.S. Patent # 5,565,331, 6,096,866, 6,017,714, 6,309,638, 6,670,451, and other U.S. and international patents pending.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449