Recombinant Mouse Neuropoietin/NP

Catalog Number: 2709-NP/CF

DESCRIPTION

Source	*E. coli*-derived Ala23-Ala204, with and without an N-terminal Met Accession # P83714
N-terminal Sequence Analysis	Met & Ala23
Predicted Molecular Mass	20 kDa

SPECIFICATIONS

Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The ED_{50} for this effect is 50-200 ng/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/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

Neuropoietin (NP; also known as cardiotrophin-2) is a 22 kDa member of the IL-6 family of cytokines. Considered to be the product of a gene duplication event involving cardiotrophin-1 (CT-1), it helps to define a subfamily within the IL-6 family that includes CT-1, CLC and CTNF. Mouse neuropoietin is synthesized as a 204 amino acid (aa) precursor that contains a 22 aa signal sequence and a 192 aa mature segment. The secreted molecule is characterized by the presence of four α-helices, typical of hematopoietic superfamily molecules. Mature mouse neuropoietin shares 88%, 90% and 95% aa identity to chimpanzee, canine and rat neuropoietin, respectively. The human gene is suggested to have evolved towards a pseudogene, a point of interest in that neuropoietin is reported to signal through the CNTF complex (*i.e.*, gp130, CNTF Rα and LIF R). NP will mediate motor neuron survival, and appears to be selectively expressed in the embryo by tissues involved with nervous system development (1).

References:

1. Derouet, D. *et al.*, 2004, Proc. Natl. Acad. Sci. USA **101**:4827.

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