



Midkine, mouse recombinant

Catalog No: 97598
Lot No: XXXXX
Source: *E. coli*
Synonyms: NEGF-2, Neurite Growth-Promoting Factor 2, MK, Neurite outgrowth-promoting protein, Midgestation and kidney protein, Amphiregulin-associated protein, ARAP, Neurite outgrowth-promoting factor 2, FLJ27379, Midkine, MK1, NEGF2

Background

Midkine (MK) is the product of a retinoic acid responsive gene, MK, and is a member of a family of heparin binding factors. It contains 121 amino acid residues including 10 conserved cysteine residues, all of which appear to be disulphide linked.

Midkine is expressed during embryogenesis, showing an expression pattern that suggests functions in neurogenesis, cell migration, secondary organogenetic induction, and mesoderm-epithelial interaction. The widespread downregulation of MK in the adult human is reverted in a number of cancers, in which polypeptides are able to act as both transforming growth factors and promoters of angiogenesis. Midkine (MK), induces chemotaxis of human neutrophils and was found to trigger mobilization of intracellular calcium of these cells. Midkine induces histamine release from rat peritoneal mast cells with a rapid response in a dose dependent manner. Midkine is also a potent stimulator of collagen and glycosaminoglycan synthesis.

Description

Midkine mouse recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 120 amino acids and having a molecular mass of 13.3 kDa. Midkine mouse is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2um filtered concentrated solution in PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Midkine in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Midkine, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Midkine Mouse should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by HPLC and SDS-PAGE.

Amino Acid Sequence

VAKKKEKVKK GSECSEWTWG PCTPSSKDCG MGFREGTCGA QTQRVHCKVP CNWKKEFGAD CKYKFESWGA CDGSTGTKAR
QGTLKKARYN AQCQETIRVT KPCTSKTKSK TKAKKGGKGD

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Activity

Fully biologically active when compared to standard. Determined by its ability to chemoattract human neutrophils using a concentration range of 10 - 100 ng/ml corresponding to a specific activity of 10,000 - 100,000 IU/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.