



## Midkine, His Tag, human recombinant (rHuMidkine-His)

**Catalog No:** 94979  
**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 Human Recombinant is manufactured with N-terminal fusion of His Tag, having a molecular mass of 14.6 kDa protein and containing 121 amino acid residues of the Midkine human and 10 additional amino acid residues His Tag. Midkine was purified with a three-step procedure using affinity Ni-NTA chromatography and size exclusion chromatography before and after refolding. The amino acid sequence of the Midkine human recombinant is 100% homologous to the amino acid sequence of the Midkine human without signal sequence.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Lyophilized from 0.5 mg/ml in 0.05 M phosphate buffer and 0.1 M NaCl, pH 7.2.

### Solubility

Add 0.2 ml of PBS pH 7.2 and let the lyophilized pellet dissolve completely.

### Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

### Purity

Greater than 95% as determined by SDS-PAGE.

### Amino Acid Sequence

MKHHHHHHHM KKKDKVKKGG PGSECAEWAW GPCTPSSKDC GVGFRGTGCG AQTQRIKRCRV PCNWKKEFGA DCKYKFENWG  
ACDGGTGTKV RQGLTKKARY NAQCQETIRV TKPCTPKTKA KAKAKKGGK D

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### Applications

WB\*ELISA

### 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.**

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