

Recombinant Mouse Midkine (rm MK / NEGF-2)

Synonyms: Midgestation and kidney protein, Neurite Growth-Promoting factor 2, Neurite outgrowth-promoting protein, Amphiregulin-associated protein (ARAP)

Introduction: Midkine is the product of a retinoic acid responsive gene and 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: Recombinant mouse Midkine is a single, non-glycosylated, polypeptide chain containing 120 amino acids and having a molecular mass of 13.3kDa
The Midkine Mouse is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: The protein was lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.

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

Stability: Lyophilized MK although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MK 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 by SDS-PAGE

Amino Acid Sequence: VAKKKEKVKK GSECSEWTWG PCTPSSKDCG MGFREGTCGA QTQRVHCKVP
CNWKKEFGAD CKYKFESWGA CDGSTGTKAR QGTLKKARYN AQCQETIRVT KPCTSKTKSK
TKAKKGKGD

Biological 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.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

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| <i>small</i> | 5 µg | Cat.N° | 12345030 |
| <i>medium</i> | 20 µg | Cat.N° | 12345034 |

ImmunoTools Excellent Quality - Advantageously priced

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