

## Recombinant Murine Midkine (rMuMidkine)

## PrimeGene Technical Data Sheet

Catalog Number: 127-18

**Source:** Escherichia coli.

**Molecular Weight:** Approximately 13.2 kDa, a single non-glycosylated polypeptide chain containing 120 amino acids.

**Quantity:**  $5\mu g/20\mu g/1000\mu g$ 

AA Sequence: VAKKKEKVKK GSECSEWTWG PCTPSSKDCG MGFREGTCGA QTQRVHCKVP

CNWKKEFGAD CKYKFESWGA CDGSTGTKAR QGTLKKARYN AQCQETIRVT

KPCTSKTKSK TKAKKGKGKD

**Purity:** > 96 % by SDS-PAGE and HPLC analyses.

Biological Activity: Fully biologically active when compared to standard. The biological activity determined by a

chemotaxis bioassay using human neutrophils is in a concentration range of 10-100 ng/ml.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in 2 × PBS, pH7.4.

**Endotoxin:** Less than 1 EU/μg of rMuMidkine as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the

bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1~% BSA to a concentration of 0.1-1.0~mg/ml. Stock solutions should be apportioned into working aliquots and

stored at  $\leq$  -20°C. Further dilutions should be made in appropriate buffered solutions.

**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.

Usage: This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further

evaluation purposes. NOT FOR HUMAN USE.

## Murine Midkine

Midkine, also named MK, MK1, NEGF 2, is belonging to the neurotrophic and developmentally-regulated heparin-binding molecules family. It is encoded by the MDK gene. The Midkine protein includes five intrachain disulfide bonds which hold two domains and there are three antiparallel beta-sheets in each domain. A chondroitin sulfate proteoglycan, protein-tyrosine phosphatase zeta (PTPzeta), is a receptor for MK. MK promotes the growth, survival, and migration of various cells, and plays roles in neurogenesis and epithelial mesenchymal interactions during organogenesis. The predicted molecular weight is approximately 13.2 kDa, based on a mature peptide length of 118 amino acid residues in the mouse and 121 amino acid residues in the human. Across species, MK shows 87 % identity between the human and murine proteins.

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