

## 32-1605: Midkine Recombinant Protein

**Alternative Name :** NEGF-2, Neurite Growth-Promoting Factor 2, MK, Neurite outgrowth-promoting protein, Midkine, Midkine protein, Amphiregulin-associated protein, ARAP, Neurite outgrowth-promoting factor 2, FLJ27379, Midkine, MK1, NEGF2.

### Description

Source : Escherichia Coli. Midkine Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 123 amino acids and having a molecular mass of 13.4kDa. The Midkine is purified by proprietary chromatographic techniques. 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 organogenesis, 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.

### Product Info

**Amount :** 20 µg  
**Purification :** Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.  
**Content :** Lyophilized from a 0.2µm filtered concentrated solution in 1xPBS, pH 7.4.  
**Storage condition :** Lyophilized Midkine although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Midkine should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.  
**Amino Acid :** VAKKKDKVKK GPGSECAEW AWGPCTPSSK DCGVGFREGT CGAQTQRIRC RVPCNWKKEF  
 GADCKYKFEN WGACDGGTGT KVRQGTLLKA RYNAQCQETI RVTKPCTPKT KAKAKAKKGK GKD.

### Application Note

It is recommended to reconstitute the lyophilized Midkine in sterile 18M-cm H<sub>2</sub>O not less than 100Åµg/ml, which can then be further diluted to other aqueous solutions. Determined by its ability to chemoattract human neutrophils using a concentration range of 0.1-10 ng/ml corresponding to a specific activity of 100,000-10,000,000IU/mg.

