



# Recombinant Human Midkine

20180115BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-071</b>
Size:	20 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	4192
<b>Synonyms:</b>	MDK; MK; NEGF2

Midkine (MK) and its functionally-related protein Pleiotrophin are heparin-binding neurotrophic factors that signal through the same receptor, known as anaplastic lymphoma kinase (ALK). MK plays an important regulatory role in epithelial-mesenchymal interactions during fetal development and in postnatal lung development. MK chemoattracts embryonic neurons, neutrophils and macrophages, and by signaling through the ALK receptor it exerts angiogenic, growth and survival activities during tumorigenesis. Recombinant human Midkine is a 13.4 kDa protein containing 123 amino acid residues including five intra-molecular disulfide bonds.

## Sequence

VAKKKDKVKK GPGSECAEW AWGPCTPSSK DCGVGFREGT  
CGAQTQRIRC RVPCNWKKEF GADCKYKFEN WGACDGGTGT  
KVRQGTLLKKA RYNAQCQETI RVTKPCPTPKT KAKAKAKKGGK GKD

## Database References

<b>Protein RefSeq:</b>	NP_001012333
<b>Uniprot ID:</b>	P21741
<b>mRNA RefSeq:</b>	NM_001012333

## Product Specifications

<b>Expressed in</b>	E. coli
<b>Purity</b>	> 98% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng /µg of protein (<1EU/µg).
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	123
<b>MW:</b>	13.4 kDa

**Stability:** The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

**Reconstitution:** Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Determined by its ability to chemoattract human neutrophils using a concentration range of 0.1-10.0 ng/ml.