

# Growth Factor Data Sheet

GoldBio growth factors are manufactured for **RESEARCH USE ONLY** and cannot be sold for human consumption!

Midkine (MDK) is a heparin-binding growth factor that is expressed in various cell types during embryo development and in a variety of carcinomas. It is induced by retinoic acid, as well as during oncogenesis, inflammation, and tissue repair. MDK is pleiotropic and promotes angiogenesis, neurogenesis, chondrogenesis, cell growth, cell migration, and tumorigenesis. It also inhibits apoptosis in some cells. MDK acts through several different receptors including PTP, ALK, PTP-zeta, and LRP. The amino acid sequence of human MDK is about 50% homologous to human pleiotrophin (PTN).

<b>Catalog Number</b>	<b>1170-18</b>
<b>Product Name</b>	<b>MDK, Human</b> Recombinant Human Midkine (MDK) Neurite Growth-Promoting Factor 2 (NEGF2) Amphiregulin-Associated Protein (ARAP) Midgestation and Kidney Protein (MK) MK1
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~13.4 kDa (123 amino acids)
<b>Sequence</b>	VAKKKDKVKK GPGSECAEW AWGPCTPSSK DCGVGFREGT CGAQTQRIRC RVPCNWKKEF GADCKYKFEN WGACDGGTGT KVRQGLTKKA RYNAQCQETI RVTKPCTPKT KAKAKAKKGG KGD
<b>Accession Number</b>	<a href="#">P21741</a>
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human neutrophils is in a concentration range of 0.1-10 ng/ml.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.