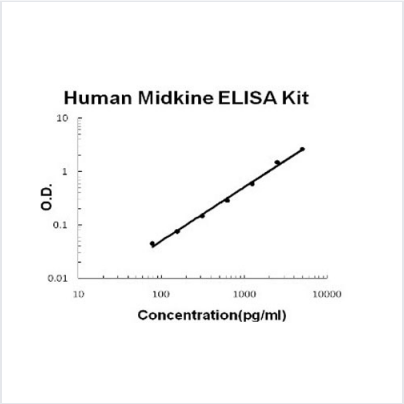
Midkine (MDK) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Midkine (MDK), ELISA Kit
Full Product Name	Human Midkine PicoKine ELISA Kit
Product Gene Name	MDK elisa kit
Product Synonym Names	Midkine; midkine (neurite growth-promoting factor 2); Amphiregulin associated protein; Amphiregulin-associated protein; ARAP; FLJ27379; Mdk; Midgestation and kidney protein; Midkine; MK 1; MK; MK_HUMAN; MK1; NEGF 2; NEGF2; Neurite growth promoting factor 2; Neurite outgrowth promoting protein; Neurite outgrowth-promoting factor 2; Neurite outgrowth-promoting protein; Retinoic acid inducible factor
Species Reactivity	Human
Assay Type	Sandwich
Samples	Cell culture supernates, serum and plasma (heparin, EDTA)
Detection Range	78pg/ml-5000pg/ml
Sensitivity	< 10pg/ml
Specificity	Natural and recombinant human Midkine
Preparation and Storage	Store at 4 degree C for 6 months, at -20 degree C for 12 months. Avoid multiple freeze-thaw cycles (Shipped with wet ice.)
Inter-assay Precision	Inter-Assay Precision (Precision between assays) Three samples of known concentration were tested in separate assays to assess inter-assay precision.
Intra-assay Precision	Intra-Assay Precision (Precision within an assay) Three samples of known concentration were tested on one plate to assess intra-assay precision.
Molecular Weight	9,512 Da
OMIM	162096
3D Structure	ModBase 3D Structure for P21741
Production Time	Due to severe delay and raw materials shortage, production time may takes between 5-8 weeks.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for MDK elisa kit	**Principle of the assay:** human Midkine ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Midkine has been precoated onto 96-well plates. Standards(E.coli, K23-D143) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Midkine is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Midkine amount of sample captured in plate. **Background:** Midkine(MK or MDK) also known as neurite growth-promoting factor 2(NEGF2) is a protein that in humans is encoded by the MDK gene. Midkine is a basic heparin-binding growth factor of low molecular weight, and forms a family with pleiotrophin(NEGF1, 46% homologous with MK). It is a nonglycosylated protein, composed of two domains held by disulfide bridges. It is a developmentally important retinoic acid-responsive gene product strongly induced during mid-gestation, hence the name midkine. Restricted mainly to certain tissues in the normal adult, it is strongly induced during oncogenesis, inflammation and tissue repair. MK is pleiotropic, capable of exerting activities such as cell proliferation, cell migration, angiogenesis and fibrinolysis. A molecular complex containing receptor-type tyrosine phosphatase zeta(PTPzeta), low density lipoprotein receptor-related protein(LRP1), anaplastic leukemia kinase (ALK) and syndecans is considered to be its receptor.

Other Notes	Small volumes of MDK elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MDK purchase	MBS177295 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Midkine (MDK) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing MDK. The ELISA analytical biochemical technique of the MBS177295 kit is based on MDK antibody-MDK antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect MDK antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, MDK. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of MDK elisa kit
Human Midkine PicoKine ELISA Kit standard curve

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MDK. It may not necessarily be applicable to this product.

NCBI GI #	127116
NCBI GeneID	4192
NCBI Accession #	P21741.1
UniProt Primary Accession #	P21741
UniProt Secondary Accession #	Q2LEK4; Q9UCC7
UniProt Related Accession #	P21741
NCBI Official Full Name	Midkine
NCBI Official Synonym Full Names	midkine (neurite growth-promoting factor 2)
NCBI Official Symbol	MDK
NCBI Official Synonym Symbols	MK; ARAP; NEGF2
UniProt Protein Name	Midkine
UniProt Synonym Protein Names	Amphiregulin-associated protein; ARAP; Midgestation and kidney protein; Neurite outgrowth-promoting factor 2; Neurite outgrowth-promoting protein
Protein Family	Midkine
UniProt Gene Name	MDK
UniProt Synonym Gene Names	MK1; NEGF2; MK; ARAP
UniProt Entry Name	MK_HUMAN

NCBI Protein Information	midkine; retinoic acid inducible factor; amphiregulin-associated protein; midgestation and kidney protein; neurite outgrowth-promoting factor 2
NCBI Summary for MDK	This gene encodes a member of a small family of secreted growth factors that binds heparin and responds to retinoic acid. The encoded protein promotes cell growth, migration, and angiogenesis, in particular during tumorigenesis. This gene has been targeted as a therapeutic for a variety of different disorders. Alternatively spliced transcript variants encoding multiple isoforms have been observed. [provided by RefSeq, Jul 2012]
UniProt Comments for MDK	MDK: Developmentally regulated, secreted growth factor homologous to pleiotrophin (PTN), which has heparin binding activity. Binds anaplastic lymphoma kinase (ALK) which induces ALK activation and subsequent phosphorylation of the insulin receptor substrate (IRS1), followed by the activation of mitogen-activated protein kinase (MAPK) and PI3-kinase, and the induction of cell proliferation. Involved in neointima formation after arterial injury, possibly by mediating leukocyte recruitment. Also involved in early fetal adrenal gland development. Belongs to the pleiotrophin family. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 11p11.2 Cellular Component: cell projection; cytoplasm; extracellular region Molecular Function: heparin binding; growth factor activity Biological Process: response to drug; nervous system development; cell migration; Notch signaling pathway; dentate gyrus development; behavioral fear response; short-term memory; adrenal gland development; cerebellar granular layer development; positive regulation of transcription, DNA-dependent; response to glucocorticoid stimulus; signal transduction; positive regulation of cell division; response to wounding; cerebral cortex development; negative regulation of neuron apoptosis; cell differentiation; defecation; regulation of behavior
Research Articles on MDK	**1.** MK might play an important role in the progression of HNSCC and may be a useful prognostic factor
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