

Human Midkine / MDK Protein

Catalog Number: 10247-HNAB



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

FLJ27379, MK, NRG2

Protein Construction:

A DNA sequence encoding the human MDK (P21741) (Met 1-Asp 143) was expressed and purified.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured by its binding ability in a functional ELISA.

Immobilized human MDK (Cat:10247-HNAB) at 10 µg/ml (100 µl/well) can bind mouse SDC4-Fc (Cat:50726-M02H) with a linear range of 0.16-1.25 µg/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 21

Molecular Mass:

The secreted recombinant human MDK consists of 123 amino acids and predicts a molecular mass of 13.4 kDa. It migrates as an approximately 18 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM PBS, 1 M NaCl, pH 6.8

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

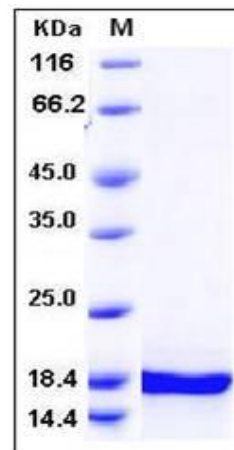
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Midkine, also known as Amphiregulin-associated protein, Midgestation and kidney protein, Neurite outgrowth-promoting factor 2, Neurite outgrowth-promoting protein, MDK and NRG2, is a secreted protein which belongs to the pleiotrophin family. Midkine / MDK is expressed in a variety of malignant tumors and promotes their growth and invasion. Midkine / MDK is expressed in damaged tissues and involved in the reparative process. It is also involved in inflammatory reactions by promoting the migration of leukocytes, induction of chemokines and suppression of regulatory T cells. Midkine / MDK is a heparin-binding growth factor, implicated in various biological phenomena such as neuronal survival and differentiation, tissue remodeling and carcinogenesis. Together with pleiotrophin, Midkine / MDK constitutes a family that is distinct from other heparin-binding growth factors. Midkine / MDK has heparin binding activity, and growth promoting activity. Midkine / MDK is involved in neointima formation after arterial injury, possibly by mediating leukocyte recruitment. It is also involved in early fetal adrenal gland development. Midkine / MDK binds to oversulfated structures in heparan sulfate and chondroitin sulfate. The midkine receptor is a molecular complex containing proteoglycans. Midkine promotes migration, survival and other activities of target cells. Midkine / MDK appears to be helpful for the treatment of injuries in the heart, brain, spinal cord and retina. Midkine / MDK inhibitors are expected to be effective in the treatment of malignancies, rheumatoid arthritis, multiple sclerosis, renal diseases, restenosis, hypertension and adhesion after surgery.

References

1. Kadomatsu, K. 2000, Nippon Rinsho. 58 (6): 1337-47.
2. Shibata, Y. et al., 2002, Mol Cell Biol. 22 (19): 6788-96.
3. Suzuki, N. et al., 2004, J Biol Chem. 279 (17): 17785-91.
4. Murasugi, A. et al., 2002, Biosci Biotechnol Biochem. 66 (6): 1295-300.

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