



Midkine Human, Rabbit Polyclonal Antibody

Product Data Sheet

Source of Antigen: *E.coli*

Host: Rabbit

Cat. No.:

RD181042050 (0.05 mg)

Other names: MK, NFGF-2, Neurite growth promoting factor 2

Research topic

Oncology

Preparation

The antibody was raised in rabbits by immunization with the recombinant Human Midkine.

Amino Acid Sequence

The immunization antigen (14.6 kDa) is a protein containing 121 amino acid residues of the human Midkine and 10 additional amino acid residues - HisTag (highlighted).

MKHHHHHHHM KKKDKVKKGG PGSECAEWAW GPCTPSSKDC GVGFRGTCG AQTQRIRCRV PCNWKKEFGA DCKYKFENWG
ACDGGTGTKV RQGLTKKARY NAQCQETIRV TKPCTPKTKA KAKAKKGGK D

Species Reactivity

Human

Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human Midkine.

Antibody Content

0.05 mg (determined by BCA method, BSA was used as a standard)

Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

Reconstitution

Add 0.05 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration

See vial label.

Lot Number

See vial label.

Quality Control Test

Indirect ELISA - to determine titer of the antibody
SDS PAGE - to determine purity of the antibody

Applications

ELISA, Immunohistochemistry, Western blotting

Introduction to the Molecule

Midkine (MK, also called neurite growth promoting factor 2, NEGF-2), a product of a retinoic acid responsive gene, is a secreted 13 kDa protein belonging to the family of heparin binding growth/differentiation factors. MK shares 45% sequence identity with other member of this family called Pleiotrophin (HB-GAM). Midkine is composed of two domains held together by disulfide linkages. The C-terminally located domain contains two heparin binding sites and is usually responsible for midkine activity. Part of the MK activity is enhanced by dimerization of MK. Midkine has been found in vertebrates from human to zebrafish and is most strongly expressed in midgestation. In the adult MK expression is restricted. In addition to normal development, MK is also involved in the pathogenesis of diseases e.g. inflammatory diseases, human carcinomas such as esophageal, stomach, colon, pancreatic, thyroid, lung, urinary, hepatocellular, neuroblastoma, glioblastoma, Wilm's tumor etc. High MK levels are associated with poor prognosis in some type of cancer. The increased expression in many carcinomas indicates that MK can be applied to the diagnosis of malignancy. Midkine is expressed during the reparative stage of bone fractures, also suppresses infection of certain viruses including HIV in target cells. Anti-apoptotic and cell protecting activity of midkine makes it to be a promising in therapy.

References to this Product

- Dai LC, Xu DY, Yao X, Min LS, Zhao N, Xu BY, Xu ZP, Lu YL . *Construction of a fusion protein expression vector MK-EGFP and its subcellular localization in different carcinoma cell lines.* [World J Gastroenterol](#) . Dec 21;12(47):7649-53 (2006)

Note

This product is for research use only.

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