

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Midkine in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human Midkine is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse Midkine Gly89-Asp140 Accession # P12025
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Midkine (MK; also Retinoid acid-induced differentiation factor) is a secreted heparin-binding member of the very small pleiotrophin family of proteins. Although its predicted MW is 13 kDa, it runs anomalously at 15-17 kDa in SDS-PAGE. MK is strongly expressed in the embryo, but is known to be secreted in the adult by endothelium, preadipocytes, proximal renal tubular epithelium, and CD4⁺ T cells. MK has multiple activities, including the inhibition of regulatory T cell production, the promotion of adipocyte formation, and the induction of chemokine production by smooth muscle, the clustering of Ach receptors on myoblasts, and the migration of embryonic neurons plus neutrophils and macrophages. It has multiple receptors, including heparin and chondroitin sulfate, LRP-1, nucleolin, ALK, and PTP-zeta. Mature mouse midkine is 118 amino acids (aa) in length (aa 23-140). It possesses two distinct domains, an N-terminal domain spanning aa 23-71, and a C-terminal domain that encompasses aa 81-140. The C-terminal domain is further divided into two basic amino acid clusters that bind heparin. There are two splice variants reported for mouse midkine. One shows a deletion of aa 39-103, while another shows a deletion of aa 80-133. Midkine will form a covalent, crosslinked homodimer through the action of tissue type II transglutaminase. Full-length mature mouse MK (aa 23-140) shares 97% and 86% aa sequence with full-length rat and human MK, respectively.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.