

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Lefty in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Lefty-1 Leu22-Arg135, His6, Leu136-Pro368 Accession # Q64280
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.

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

Lefty was first identified in a screen for undifferentiated cell-specific cDNAs from the P19 mouse embryonal carcinoma cells. Its mRNA expression on the left side of the developing embryo earned it the name "lefty". Two genes exist in mouse (Lefty-1 and Lefty-2) and two in humans (Lefty-A (ebaf) and Lefty-B). By amino acid sequence, mouse Lefty-1 and -2 are more similar to each other (90%) than to either Lefty-A or -B in humans (81 - 82% identical). Lefty contains the six cysteine residues that are conserved among TGF-β related proteins and that are necessary to form the cysteine-knot structure. However, lefty is distinct from other family members in that it has two RXXR cleavage sites, a longer carboxy terminal sequence, and it lacks the cysteine residue required for intermolecular disulfide linkage. Thus, mature forms of lefty are larger than mature forms of other TGF-β-related proteins. Mouse Lefty-1 is differentially processed depending on the cells in which it is synthesized, and both processing sites can be utilized.

Lefty homologues have been identified in other vertebrate organisms including chick, frog, and zebrafish. Although the amino acid sequence identity is not well conserved among vertebrate species, the expression pattern of lefty on the left side is well conserved. Lefty-1 is expressed strongly on the left side of the prospective floor plate and weakly in the left half of the lateral plate mesoderm in E8 mice embryos. In all species examined, lefty proteins function in patterning left-right asymmetry of the developing organ systems such as the heart and lung. Lefty acts as an antagonist to Nodal signaling, potentially by competing for binding to a common receptor.

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.