Mouse Hip Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 217413

Catalog Number: FAB1568N

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Hip in direct ELISAs and Western blots.
Source	Monoclonal Rat IgG_{2A} Clone # 217413
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Hip Met1-Arg678 Accession # AAD31172
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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

Hedgehog signaling proteins act as mitogens, morphogens, or inducing factors in many different cell types during embryonic development. They aid in growth, patterning, and morphogenesis in both vertebrates and insects (1). Hip (Hedgehog-interacting protein) is a type I transmembrane protein identified for its ability to bind biologically active Sonic Hedgehog. It is comprised of 700 aa, and includes a hydrophobic signal sequence, two EGF-like domains near the C-terminus, and a 22 amino acid membrane-spanning region at the C-terminal end (2). Hip has only been identified in vertebrates and binds all three mammalian Hedgehogs: sonic (Shh), desert (Dhh), and Indian (Ihh). Like the Hedgehog receptor Patched, Hip is a transcriptional target of Hedgehog signaling (2). Unlike Patched, Hip's ability to bind hedgehogs is not involved in transducing a signal intracellularly, rather it regulates the availability of Hedgehog ligand extracellularly (3). Transgenic mice overexpressing Hip in proliferating chondrocytes display skeletal defects similar to those observed in Ihh mutant mice. These results indicate that Hip is involved in attenuating Hedgehog signaling (2). The expression pattern of Hip correlates with its ability to interact with all three mammalian Hedgehogs. It is expressed in a variety of organs, adjacent with sites of hedgehog expression. For instance, Shh is expressed in the epithelium of the lung, and Hip is found in the underlying lung mesenchyme (2). In fact, Hip knock-out mice exhibit neonatal lethality with respiratory failure due to defective branching morphogenesis. This phenotype correlates with altered expression of Shh markers suggesting an increase in Shh signaling (3). Interestingly, other developmental mechanisms that rely on normal Shh signaling, such as dorsal-ventral patterning of the neural tube, development of the somites, and organ laterality appeared histologically normal in $Hip^{-/-}$ mice (3). Mouse and human Hip share 94% amino acid identity through the entire protein sequence (4).

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.

Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475