

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse β IG-H3 in ELISAs and Western blots. In sandwich immunoassays, less than 6% cross-reactivity with recombinant human (rh) β IG-H3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse β IG-H3 Gly24-His683 Accession # P82198
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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
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

Beta IG-H3, also known as TGFB1 and RGD-CAP, is a matricellular adaptor protein that is induced in most cell types in response to TGF- β stimulation (1-4). The mouse β IG-H3 cDNA encodes a 683 amino acid (aa) precursor that includes a 23 aa signal sequence, one EMI domain, four FAS1 domains, and one RGD motif (2). Mouse β IG-H3 shares 91% aa sequence identity with human and porcine β IG-H3. β IG-H3 is expressed as a 75 kDa protein with no post-translational additions (5). Following secretion, cleavages at multiple positions near the C-terminal end liberate peptides with pro-apoptotic activity (5, 6). Peptides that encompass the RGD motif contribute to the pro-apoptotic effects of TGF- β (6). FAS1 domains contain YH motifs that are characterized by conserved Tyr and His residues (7). The YH motifs in each of the FAS1 domains enable β IG-H3 to bind to matrix fibronectin, collagen I, collagen VI, biglycan, and decorin (3, 8-11), in addition to cell expressed integrins α V/ β 3, α V β 5, and α 3 β 1 (7, 8, 12, 13). The expression of β IG-H3 is modulated at particular developmental stages in some cell types. It is upregulated in keratinocytes and immature dendritic cells but downregulated in osteoblasts (8, 12, 14). It promotes keratinocyte differentiation but blocks osteoblast differentiation (8, 12). β IG-H3 stimulates macrophage endocytosis and vascular endothelial cell proliferation and migration (13, 14). High glucose levels induce β IG-H3 in renal proximal tubule cells which is predictive of diabetic nephropathy (3). Several point mutations (clustered in the fourth FAS1 domain) of β IG-H3 are linked to different corneal dystrophies (15). β IG-H3 is downregulated in many cancers (4, 16) and functions as a suppressor of tumorigenicity when overexpressed (2, 4, 16).

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.