

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
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

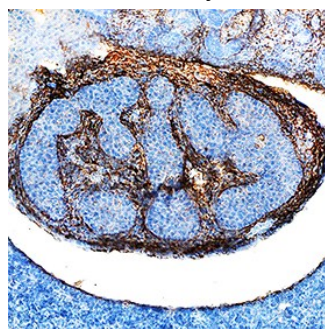
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	0.1 μ g/mL	Recombinant Mouse β IG-H3 (Catalog # 2559-BG)
Immunohistochemistry	5-15 μ g/mL	See Below
Mouse βIG-H3 Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 μ g/mL	Mouse β IG-H3 Antibody (Catalog # AF2559)
ELISA Detection	0.1-0.4 μ g/mL	Mouse β IG-H3 Biotinylated Antibody (Catalog # BAF2559)
Standard		Recombinant Mouse β IG-H3 (Catalog # 2559-BG)

DATA

Immunohistochemistry



β IG-H3 in Mouse Embryo. β IG-H3 was detected in immersion fixed frozen sections of mouse embryo (13 d.p.c.) using Sheep Anti-Mouse β IG-H3 Antigen Affinity-purified Polyclonal Antibody (Catalog # [AF2559](#)) at 5 μ g/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # [CTS008](#)) and counterstained with hematoxylin (blue). Specific staining was localized to developing duodenum. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Beta IG-H3, also known as TGFBI 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).

References:

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