DESCRIPTION

Species Reactivity: Human

Specificity: Detects human LAP-TGF-β1 in Western blots. In this format, less than 1% cross-reactivity with mature recombinant human (rH) TGF-β1, porcine TGF-β2, rhTGF-β3, and recombinant amphibian TGF-β5 is observed.

Source: Polyclonal Goat IgG

Purification: Antigen Affinity-purified

Immunogen: *S. frugiperda* insect ovarian cell line SF21-derived recombinant human LAP-TGF-β1 and Chinese hamster ovary cell line CHO-derived recombinant human LAP-TGF-β1

Leu30-Ser390

Accession # P01137

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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.

<table>
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<th>Recommended Concentration</th>
<th>Sample</th>
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<td>0.1 µg/mL</td>
<td>Recombinant Human LAP-TGF-β1 (Catalog # 246-LP)</td>
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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.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 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

TGF-β1 (transforming growth factor beta 1) and the closely related TGF-β2 and β3 are members of the large TGF-β superfamily. TGF-β proteins are highly pleiotropic cytokines that regulate processes such as immune function, proliferation and epithelial-mesenchymal transition (1-3). Human TGF-β1 cDNA encodes a 390 amino acid (aa) precursor that contains a 29 aa signal peptide and a 361 aa proprotein (4). A furin-like convertase processes the proprotein within the trans-Golgi to generate an N-terminal 249 aa (aa 30-278) latency-associated peptide (LAP) and a C-terminal 112 aa (aa 279-390) mature TGF-β1 (4-6). Disulfide-linked homodimers of LAP and TGF-β1 remain non-covalently associated after secretion, forming the small latent TGF-β1 complex (4-8). Purified LAP is also capable of associating with active TGF-β with high affinity, and can neutralize TGF-β activity (9). Covalent linkage of LAP to one of three latent TGF-β isoforms and those of most other species (9). Mutations within the LAP are associated with Camurati-Engelmann disease, a rare sclerosing bone dysplasia characterized by inappropriate presence of active TGF-β1 (10).

References: