Human Thymosin β4 Antibody
Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6796

DESCRIPTION

Species Reactivity  Human

Specificity  Detects human Thymosin β4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) Thymosin β10 and rhThymosin β16 is observed.

Source  Polyclonal Sheep IgG

Purification  Antigen Affinity-purified

Immunogen  E. coli-derived recombinant human Thymosin β4 Ser2-20
Accession # P62328

Formulation  Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm 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.

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<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
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<td>Western Blot</td>
<td>1 µg/mL See Below</td>
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<tr>
<td>Immunocytochemistry</td>
<td>5-15 µg/mL See Below</td>
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DATA

Western Blot

Detection of Human Thymosin β4 by Western Blot. Western blot shows lysates of human peripheral blood lymphocytes (PBLC), HL-60 human acute promyelocytic leukemia cell line, and human mature dendritic cells. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human Thymosin β4-Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6796) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Thymosin β4 at approximately 5.0 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry

Thymosin β4 in HeLa Human Cell Line. Thymosin β4 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Human Thymosin β4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6796) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution  Sterile PBS to a final concentration of 0.2 mg/mL.

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.

- 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

Thymosin beta 4 (Tβ4; also TB4X and Fx) is a 5.0 kDa member of the β-thymosin family of molecules. Members of this family range from 41-44 amino acids (aa) in length, and possess an isoelectric point that lies between pH 4.0-7.0 (o-thymosins have values less than 4.0). Multiple cell types produce Tβ4, either constitutively, or after stimulation. They include platelets, endothelial cells, neutrophils, astrocytes and macrophages. Tβ4 is both a secreted and intracellular molecule. The secreted form contributes to wound healing and angiogenesis, and may act on ATPase. Intracellularly, it forms a 1:1 complex with G-actin and blocks F-actin polymerization. This regulates the availability of actin monomers for filament formation and subsequent cell migration. Mature human Tβ4 is 43 aa in length (aa 2-44). It contains an actin-binding site (aa 17-23), one acetylated Ser and five acetylated lysines (4; 12; 26; 32; 39) and one phosphorylation site at Thr23. Tβ4 undergoes proteolytic processing to generate an N-terminal acetylated peptide (aa 2-5: SerAspLysPro). Mature human Tβ4 is identical to mouse Tβ14 in aa sequence, and it shares 74% aa identity with its human family member Tβ10.