

Human Thymosin β4 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG Catalog Number: AF6796

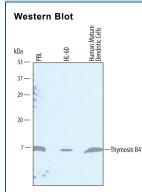
DESCRIPTION

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. Polyclonal Sheep IgG	
Source		
Purification	Antigen Affinity-purified	
Immunogen	<i>E. coli</i> -derived recombinant human Thymosin β4 Ser2-Ser44 Accession # P62328	
Formulation	rmulation 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

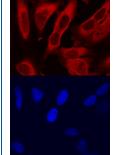
	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 μg/mL	See Below
Simple Western	10 µg/mL	HL-60 human acute promyelocytic leukemia cell line

DATA



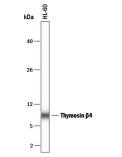
Detection of Human Thymosin β4 by Western Blot. Western blot shows lysates of human peripheral blood lymphocytes (PBL), HL-60 human acute promyelocytic leukenia cell line, and human mature dendritic cells. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human Thymosin β4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6796) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # Catalog # HAF016). A specific band was detected for Thymosin ß4 at approximately 5 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.





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 # 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.

Simple Western



Detection of Human Thymosin $\beta4$ by Simple Western ^M. Simple Western lane view shows lysates of HL-60 human acute promyelocytic leukemia cell line, loaded at 0.2 mg/mL. A specific band was detected for Thymosin $\beta4$ at approximately 8 kDa (as indicated) using 10 µg/mL of Sheep Anti-Human Thymosin $\beta4$ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6796) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 2-40 kDa separation system.

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 cas supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C curved sterile conditions after reconstitution.

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BACKGROUND

Thymosin beta 4 (T β 4; 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 (α -thymosins have values less than 4.0). Multiple cell types produce T β 4, either constitutively, or after stimulation. They include platelets, endothelial cells, neutrophils, astrocytes and macrophages. T β 4 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 T β 4 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. T β 4 undergoes proteolytic processing to generate an N-terminal acetylated peptide (aa 2-5: SerAspLysPro). Mature human T β 4 is identical to mouse T β 14 in aa sequence, and it shares 74% aa identity with its human family member T β 10.

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