

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Thymosin β 4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) Thymosin β 10 and rhThymosin β 16 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Thymosin β 4 Ser2-Ser44 Accession # P62328
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 either lyophilized or as a 0.2 μ m filtered solution in PBS.

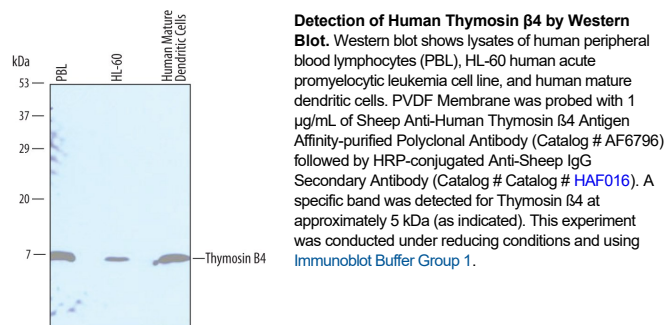
APPLICATIONS

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.

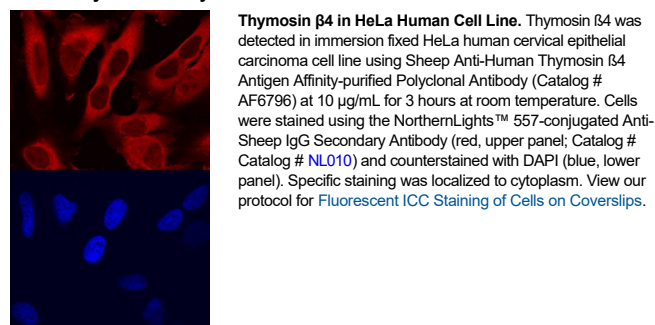
	Recommended Concentration	Sample
Western Blot	1 μ g/mL	See Below
Immunocytochemistry	5-15 μ g/mL	See Below
Simple Western	10 μ g/mL	HL-60 human acute promyelocytic leukemia cell line

DATA

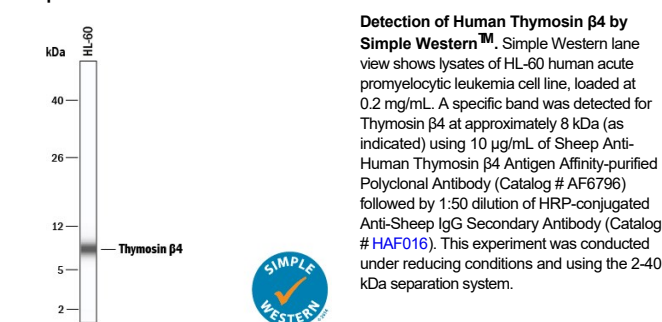
Western Blot



Immunocytochemistry



Simple Western



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. <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

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.