

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse/Rat                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | Detects human Thymosin $\beta$ 10 in direct ELISAs. Detects human, mouse, and rat Thymosin $\beta$ 10 in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) Thymosin $\beta$ 4 and rhThymosin $\beta$ 16 is observed.               |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Thymosin $\beta$ 10<br>Ala2-Ser44<br>Accession # P63313                                                                                                                                                                           |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

Thymosin beta 10 (T $\beta$ 10) is a 6.5 kDa member of the  $\beta$ -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 5.0-7.0. Multiple cell types produce T $\beta$ 10, either constitutively, or after stimulation. They include monocytes/macrophages, endothelial cells, thyroid epithelium, spermatids, fetal cerebellar Purkinje cells plus renal tubule epithelium, and multiple tumor types. T $\beta$ 10 is principally an intracellular molecule. 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. It is also known to be noncanonically secreted, acting on endothelium and blocking angiogenesis. Mature human T $\beta$ 10 is 43 aa in length (aa 2-44) (SwissProt #:P63313). It contains an actin-binding site (aa 18-23), an N-terminal acetylated alanine, four acetylated lysines (#4; 15; 26; 39), and one phosphorylation site at Thr23. Mature T $\beta$ 10 is identical to mouse T $\beta$ 10 in aa sequence, and it shares 74% aa sequence identity with its human family member T $\beta$ 4.

#### PRODUCT SPECIFIC NOTICES

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