

## Recombinant Human TMSB4X protein

Cat. No. TMSB4X-653H    Lot. No. (See product label)

### SPECIFICATION

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Overview | Recombinant Human TMSB4X protein was expressed in Escherichia coli.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Species          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Source           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| ProteinLength    | 43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Description      | Thymosin Beta 4 is a naturally occurring peptide encoded by the TMSB4X gene located on Chr. X in humans. It is found in high concentrations in blood platelets, wound fluid and other tissues in the body. Tβ-4 is a major actin regulating peptide and the primary function is to stimulate the productions of T cells, which plays important part of the immune system. The thymosin beta-4 peptide, if used after a heart attack, might reactivate cardiac progenitor cells to repair damaged heart tissue. |
| Form             | Lyophilized from a 0.2μm filtered concentrated solution in 20 mM PB, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Bio-activity     | Fully biologically active when compared to standard. The biological activity determined by its ability to produce a protective effect against hydrogen peroxide in primary lung fibroblasts is in a concentration range of 0.5 - 10 μg/ml.                                                                                                                                                                                                                                                                     |
| Molecular Mass   | Approximately 4.9 kDa, a single non-glycosylated polypeptide chain containing 43 amino acids.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| AA Sequence      | SDKPDMAEIEKFDKSKLKKTTETQEKNP LPSKETIEQEKQAGES                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | Less than 1 EU/g of rHuTβ4 as determined by LAL method.                                                                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>         | >97% by SDS-PAGE and HPLC analysis.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.                                                                                             |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                                                                                                                   |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | TMSB4X                                                                                                                                                                            |
| <b>Official Symbol</b> | TMSB4X                                                                                                                                                                            |
| <b>Synonyms</b>        | TMSB4X; thymosin beta 4, X-linked; thymosin, beta 4, X chromosome , TMSB4; thymosin beta-4; TB4X; t beta-4; prothymosin beta-4; thymosin, beta 4, X chromosome; FX; PTMB4; TMSB4; |
| <b>Gene ID</b>         | 7114                                                                                                                                                                              |
| <b>mRNA Refseq</b>     | NM_021109                                                                                                                                                                         |
| <b>Protein Refseq</b>  | NP_066932                                                                                                                                                                         |

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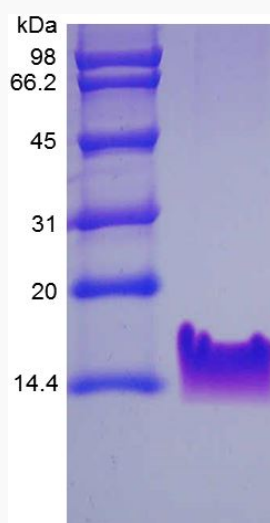
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MIM 300159

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SDS-PAGE of  
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