

# Recombinant Human Thymosin Beta 4 (rHuTβ4)

## ChemWhat Technical Data Sheet (TDS)

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<b>Catalog Number:</b>	601-20
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 4.9 kDa, a single non-glycosylated polypeptide chain containing 43 amino acids.
<b>Quantity:</b>	20µg /100µg /1000µg
<b>AA Sequence:</b>	SDKPDMAEIE KFDKSKLKKK ETQEKNPPLPS KETIEQEKQA GES
<b>Purity:</b>	> 97 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	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.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4.
<b>Endotoxin:</b>	Less than 1 EU/µg of rHuTβ4 as determined by LAL method.
<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 °C . Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

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### *Human Thymosin Beta 4*

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.