

Recombinant Human Thymosin beta 4

Information

Gene ID	7114
Accession #	P62328
Alternate Names	Fx
Source	Escherichia coli.
M.Wt	Approximately 4.9 kDa, a single non-glycosylated polypeptide chain containing 43 amino acids.
AA Sequence	SDKPDMAEIE KFDKSKLKKT ETQEKNPLPS KETIEQEKQA GES
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4.
Reconstitution	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.
Biological 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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	100µg	500µg
Recombinant Human Thymosin beta 4	100µg	500µg
Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied		

- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuTβ4 as determined by LAL method.

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.

Reference

1. Moon EY, Song JH, Yang KH. 2007. Oncol Res, 16: 507-16
2. Oh SY, Song JH, Gil JE, et al. 2006. Exp Cell Res, 312: 1651-7
3. Oh JM, Ryoo IJ, Yang Y, et al. 2008. Cancer Lett, 264: 29-35.

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