

## TCTP/TPT1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	tumor protein, translationally-controlled 1;HRF;TCTP;p23;p02
Protein Construction:	A DNA sequence encoding the human TPT1 (Met1-Cys172) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Molecular Weight:	21.4 kDa (predicted); 23 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Tumor protein, also known as TPT1, is a highly conserved protein among many eukaryotic organisms. Tumor protein is involved in a variety of cellular activities, including microtubule stabilization, calcium-binding activities, and apoptosis. The Mammalian translationally controlled tumour protein (TPT1) (or P23) is a protein that has been found to be preferentially synthesised in cells during the early growth phase of some types of tumour, but which is also expressed in normal cells. It was first identified as a histamine-releasing factor, acting in IgE +-dependent allergic reactions. In addition, TPT1 has been shown to bind to tubulin in the cytoskeleton, has a high affinity for

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calcium, is the binding target for the antimalarial compound artemisinin, and is induced in vitamin D-dependent apoptosis. TPT1 production is thought to be controlled at the translational as well as the transcriptional level.

### Reference

Thaw P. et al., 2001, Nat Struct Biol. 8 (8): 701-4.

Thiele H. et al., 2000, Eur J Biochem. 267 (17): 5473-81.

Chitpatima ST. et al., 1988, Nucleic Acids Res. 16 (5): 2350.

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