

## WTAP Protein, Human, Recombinant (Isoform 2, GST)

### General Information

Synonyms:	Mum2;Wilms tumor 1 associated protein
Protein Construction:	A DNA sequence encoding the human WTAP isoform 2 (Q15007-2) (Met 1-Arg 151) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q15007-2
Molecular Weight:	45 kDa (predicted); 45 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:	> 70 % 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 20 mM Tris, 0.15M NaCl, 0.5 mM GSH, pH 8.0. 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.

Actual storage temperature shall be subject to the COA.

**Shipping:**  
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Wilms' tumor 1-associating protein (WTAP) was previously identified as a protein associated with Wilms' tumor-1 (WT-1) protein that is essential for the development of the genitourinary system. WT1 was originally identified as a tumor suppressor for Wilms' tumor, but it is also overexpressed in a variety of cancer cells. The WTAP-WT1 axis in vascular cells suggest that WTAP is a vital and multifaceted regulator of vascular remodeling. WTAP has been suggested to function in alternative splicing, stabilization of mRNA, and cell growth. Knocking down endogenous

WTAP increased Smooth muscle cells (SMCs) proliferation, because of increased DNA synthesis and G(1)/S phase transition, together with reduced apoptosis. These effects could be the result of WTAP suppressing the transcriptional activity of WT1 in SMCs. WTAP may thus also play a role in messenger RNA processing in mammalian cells, either dependent on or independent of its interaction with WT1.

### Reference

Fukusumi Y, et al. (2008) Wtap is required for differentiation of endoderm and mesoderm in the mouse embryo. *Dev Dyn.* 237(3): 618-29.

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Small TW, et al. (2006) Wilms' tumor 1-associating protein regulates the proliferation of vascular smooth muscle cells. *Circ Res.* 99(12): 1338-46.

Rong Y, et al. (2006) Wilms' tumor 1 and signal transducers and activators of transcription 3 synergistically promote cell proliferation: a possible mechanism in sporadic Wilms' tumor. *Cancer Res.* 66(16): 8049-57.

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