

WISP1/CCN4 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	ELM-1;WISP1tc;WISP1c;CCN4;WISP-1;WISP1i
Protein Construction:	Thr23-Asn367
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	O54775
Molecular Weight:	39.4 kDa (predicted). Due to glycosylation, the protein migrates to 64-68 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. 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 Tris-Bis PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

The interplay between glioma stem cells (GSCs) and the tumor microenvironment plays crucial roles in promoting malignant growth of glioblastoma (GBM), the most lethal brain tumor. WISP1 is preferentially expressed and secreted by GSCs. Silencing WISP1 markedly disrupts GSC maintenance, reduces tumor-supportive TAMs (M2), and potently inhibits GBM growth. WISP1 signals through Integrin α6β1-Akt to maintain GSCs by an autocrine mechanism and M2 TAMs through a paracrine manner.

Reference

Tao W, et al. Dual Role of WISP1 in maintaining glioma stem cells and tumor-supportive macrophages in glioblastoma. Nat Commun. 2020 Jun 15;11(1):3015. doi: 10.1038/s41467-020-16827-z. PMID: 32541784; PMCID: PMC7295765.

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