Data Sheet (Cat.No.TMPY-02950)

TargetMol

WWP2 Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	WW domain containing E3 ubiquitin protein ligase 2;AIP2;WWp2-like
Protein Construction:	A DNA sequence encoding the human WWP2 (O00308) (Met1-Glu870) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	O00308
Molecular Weight:	126.7 kDa (predicted); 120 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:	> 90 % as determined by SDS-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 20 mM Tris, 500 mM NaCl, pH 8.0, 10% glycerol. 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

WWP2 contains 1 C2 domain, 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain and 4 WW domains. It is an E3 ubiquitin-protein ligase that accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. WWP2 can be detected in heart, throughout the brain, placenta, lung, liver, muscle, kidney and pancreas. It is also expressed in spleen and peripheral blood leukocytes. WWP2 polyubiquitinates POU5F1 by 'Lys-63'-linked conjugation and promotes it to proteasomal

degradation; in embryonic stem cells (ESCs) the ubiquitination is proposed to regulate POU5F1 protein level. WWP2 ubiquitinates EGR2 and promotes it to proteasomal degradation; in T-cells the ubiquitination inhibits activation-induced cell death. It also ubiquitinates SLC11A2; the ubiquitination is enhanced by presence of NDFIP1 and NDFIP2. WWP2 ubiquitinates RPB1 and promotes it to proteasomal degradation.

Reference

McDonald FJ,et al.(2002) Ubiquitin-protein ligase WWP2 binds to and downregulates the epithelial Na(+) channel. Am J Physiol Renal Physiol. 283 (3): F431-6.

Soond SM,et al.(2011) Selective targeting of activating and inhibitory Smads by distinct WWP2 ubiquitin ligase isoforms differentially modulates TGFβ signalling and EMT. Oncogene. 30 (21): 2451-62.

Marcucci R,et al.(2011) Pin1 and WWP2 regulate GluR2 Q/R site RNA editing by ADAR2 with opposing effects. EMBO J. 30 (20): 4211-22.

Maddika S,et al.(2011) WWP2 is an E3 ubiquitin ligase for PTEN. Nat Cell Biol. 13 (6): 728-33.

Xu H,et al.(2009) WWP2 promotes degradation of transcription factor OCT4 in human embryonic stem cells. Cell Res. 19 (5): 561-73.

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