

UBE2W Protein, Human, Recombinant (His)

General Information

Synonyms:	UBC16;UBC-16;ubiquitin-conjugating enzyme E2W (putative)
Protein Construction:	A DNA sequence encoding the human UBE2W (Q96B02-1) (Met 1-Cys 151) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q96B02-1
Molecular Weight:	19.2 kDa (predicted); 18 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:	> 97 % 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, 100 mM Arg. 0.1% Brij35, pH 8.5. 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

Ubiquitin-conjugating enzymes, also known as UBE2W, E2 enzymes and more rarely as ubiquitin-carrier enzymes, perform the second step of protein ubiquitination. The modification of protein with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. UBE2W is a member of the E2 ubiquitin-conjugating enzyme family. This enzyme

is required for post-replicative DNA damage repair. It accepts ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins. It also catalyzes monoubiquitination and "Lys-11"-linked polyubiquitination. UBE2W is also considered to regulate FANCD2 monoubiquitination. UBE2W exhibits ubiquitin conjugating enzyme activity and catalyzes the monoubiquitination of PHD domain of Fanconi anemia complementation group L (FANCL). Over-expression of UBE2W in cells promotes the monoubiquitination of FANCD2 and down-regulated UBE2W markedly reduces the UV irradiation-induced but not MMC-induced FANCD2 monoubiquitination.

Reference

- Zhang Y, et al. (2008) Generation of mouse UBE2W antibody and analysis of UBE2W expression in mouse tissues. *Sheng Wu Gong Cheng Xue Bao.* 24(4): 547-52.
- Scaglione KM, et al. (2011) Ube2w and ataxin-3 coordinately regulate the ubiquitin ligase CHIP. *Mol Cell.* 43(4): 599-612.
- Zhang Y, et al. (2011) UBE2W interacts with FANCL and regulates the monoubiquitination of Fanconi anemia protein FANCD2. *Mol Cells.* 31(2): 113-22.

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