

## UBE2G1 Protein, Human, Recombinant

### General Information

Synonyms:	E217K;UBC7;ubiquitin-conjugating enzyme E2G 1;UBE2G
Protein Construction:	A DNA sequence encoding the human UBE2G1 (P62253) (Met 1-Glu 170) was expressed and purified, with additional two amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	E. coli
Accession:	P62253
Molecular Weight:	19.5 kDa (predicted); 19.5 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:	> 85 % 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, 10% glycerol, pH 7.5. 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.

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

UBE2G1 is a member of the ubiquitin-conjugating E2 family whose members perform the second step in the ubiquitination reaction. Initially identified as the main process for protein degradation, ubiquitination is believed nowadays to be crucial for a wider range of cellular processes. The outcome of the ubiquitin-conjugation reaction, and thereby the fate of the substrate, is heavily dependent on the number of ubiquitin molecules attached and

how these ubiquitin molecules are inter-connected. To deal with this complexity and to allow adequate ubiquitination in time and space, a highly sophisticated conjugation machinery has been developed. In a sequential manner, ubiquitin becomes activated by a ubiquitin-activating enzyme (E1), which then transfers the ubiquitin to a group of ubiquitin-conjugating enzymes (E2s). Next, ubiquitin-loaded E2s are interacting with ubiquitin-protein ligases (E3s) and ubiquitin is conjugated to substrates on recruitment by the E3. These three key enzymes are operating in a hierarchical system, wherein two E1s and 35 E2s have been found and hundreds of E3s have been identified in humans.

### Reference

Sjoerd J L van Wijk, et al. (2009) A comprehensive framework of E2-RING E3 interactions of the human ubiquitin-proteasome system. *Mol Syst Biol.* 5: 317.

Nandi D, et al. (2006) The ubiquitin-proteasome system. *Journal of biosciences.* 31 (1): 137-55.

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