

## Recombinant UBE2B protein

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**Catalog No:** 82009, 82609

**Quantity:** 100, 1000 µg

**Expressed In:** *E. coli*

**Source:** Human

**Buffer Contents:** Recombinant UBE2B protein is supplied in 25 mM Tris 8.0, 300mM NaCl, 20% glycerol, 0.5 mM TCEP.

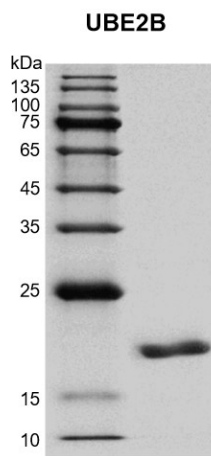
**Background:** UBE2B (Ubiquitin-conjugating enzyme E2 B) also known as E2-17kDa, HHR6B, HR6B, RAD6B and UBC2. UBE2B is a member of the E2 ubiquitin-conjugating enzyme family which is required for post-replicative DNA damage repair and plays an important role in various cellular processes. UBE2B can accept ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins. In association with the E3 enzyme BRE1 (RNF20 and/or RNF40), it plays a role in transcription regulation by catalyzing the monoubiquitination of histone H2B at 'Lys -120' to form H2BK120ub1. H2BK120ub1 gives a specific tag for epigenetic transcriptional activation, elongation by RNA polymerase II, telomeric silencing, and is also a prerequisite for H3K4me and H3K79me formation. In vitro catalyzes 'Lys-11', as well as 'Lys-48'- and 'Lys-63'-linked polyubiquitination. Required for postreplication repair of UV-damaged DNA. Associates to the E3 ligase RAD18 to form the UBE2B-RAD18 ubiquitin ligase complex involved in mono-ubiquitination of DNA-associated PCNA on 'Lys-164'. May be involved in neurite outgrowth.

**Protein Details:** Recombinant UBE2B protein that includes full length of human UBE2B protein (accession number NP\_003328.1) was expressed in *E. coli* and contains an N-terminal His tag with a molecular weight of 19.48 kDa. The purity of the protein is ≥ 95% by SDS-PAGE.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for this product is shown.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

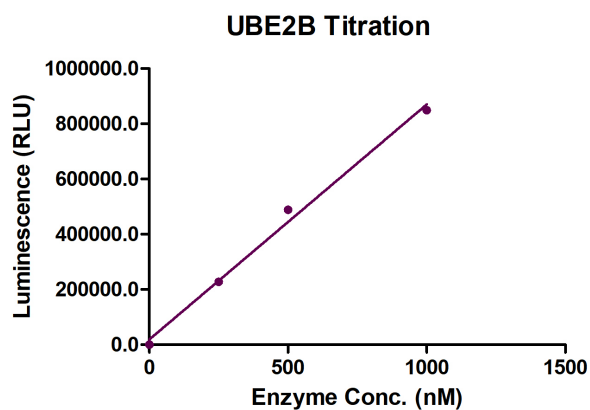


#### Recombinant UBE2B protein gel.

UBE2B protein was run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue.

MW: 19.48 kDa

Purity: >95%



#### AMP-Glo assay for UBE2B activity

7.9  $\mu$ M ubiquitin, 63 nM UBA1 and 25  $\mu$ M ATP were incubated with different concentrations of UBE2B in 10  $\mu$ l reaction system containing 40 mM Tris-HCl pH 7.4, 20 mM MgCl<sub>2</sub>, 0.5 mM DTT, 0.1 mg/ml BSA at 37°C for 1 hour. 10  $\mu$ l of AMP-Glo Reagent I

was added to the reaction and incubated for 1 hour at room temperature. Then 20  $\mu$ l of AMP-Glo Detection Solution was added and luminescence was read after another 30 min incubation.