

Recombinant UBE2R1 protein

Catalog No: 82001, 82601**Expressed In:** *E. coli***Quantity:** 100, 1000 µg**Source:** Human

Buffer Contents: Recombinant UBE2R1 protein is supplied in 25 mM Tris 8.0, 300mM NaCl, 20% glycerol, 0.5 mM TCEP.

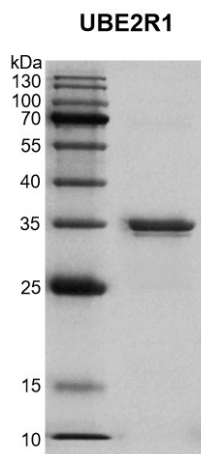
Background: UBE2R1 (Ubiquitin-conjugating enzyme E2 R1) also known as E2-CDC34, UBC3, UBCH3 and CDC34 **UBE2R1** is a member of the E2 ubiquitin-conjugating enzyme family which is required for post-replicative DNA damage repair and plays an important role in various cellular processes. **UBE2R1** cooperates with the E2 UBCH5C and the SCF(FBXW11) E3 ligase complex for the polyubiquitination of NFKBIA leading to its subsequent proteasomal degradation. Performs ubiquitin chain elongation building ubiquitin chains from the UBE2D3-primed NFKBIA-linked ubiquitin. UBE2D3 acts as an initiator E2, priming the phosphorylated NFKBIA target at positions 'Lys -21' and/or 'Lys-22' with a monoubiquitin. Cooperates with the SCF(SKP2) E3 ligase complex to regulate cell proliferation through ubiquitination and degradation of MYBL2 and KIP1. Involved in ubiquitin conjugation and degradation of CREM isoform ICERIIgamma and ATF15 resulting in abrogation of ICERIIgamma- and ATF5-mediated repression of cAMP-induced transcription during both meiotic and mitotic cell cycles. Involved in the regulation of the cell cycle G2/M phase through its targeting of the WEE1 kinase for ubiquitination and degradation. Also involved in the degradation of beta-catenin. Is target of human herpes virus 1 protein ICP0, leading to ICP0-dependent dynamic interaction with proteasomes.

Protein Details: Recombinant UBE2R1 protein that includes full length of human UBE2R1 protein (accession number NP_004350.1) was expressed in *E. coli* and contains an N-terminal His tag with a molecular weight of 28.9 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.

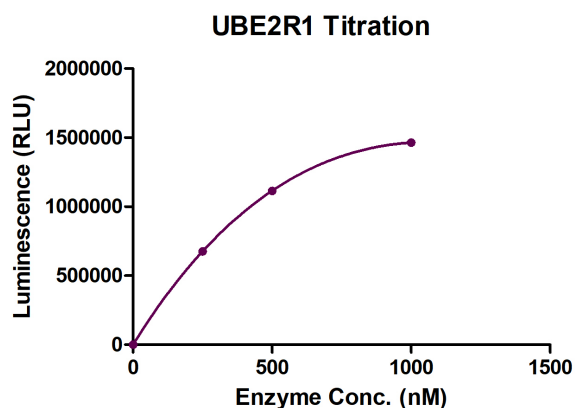


Recombinant UBE2R1 protein gel.

UBE2D3 protein was run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue.

MW: 28.9 kDa

Purity: >95%



AMP-Glo assay for UBE2R1 activity

7.9 μ M ubiquitin, 63 nM UBA1 and 25 μ M ATP were incubated with different concentrations of UBE2R1 in 10 μ l reaction system containing 40 mM Tris-HCl pH 7.4, 20 mM MgCl₂, 0.5 mM DTT, 0.1 mg/ml BSA at 37°C for 1 hour. 10 μ l of AMP-Glo Reagent I was added to the reaction and incubated for 1 hour at room temperature. Then 20 μ l of AMP-Glo Detection Solution was added and luminescence was read after another 30 min incubation.