

## Recombinant UBA1 protein

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**Catalog No:** 82019, 82619

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Source:** Human

**Buffer Contents:** Recombinant UBA1 protein is supplied in 25 mM HEPES pH 7.5, 500 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

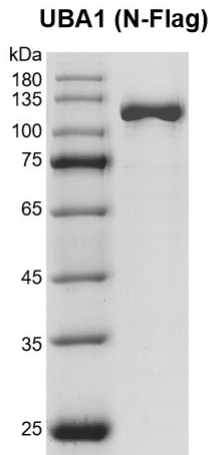
**Background:** UBA1 (Ubiquitin-like modifier-activating) also known as A1S9, A1S9T, A1ST, AMCX1, CFAP124, GXP1, POC20, SMAX2, UBA1A, UBE1, UBE1X and VEXAS. UBA1 catalyzes the first step in ubiquitin conjugation to mark cellular proteins for degradation through the ubiquitin-proteasome system. Activates ubiquitin by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this residue to the side chain of a cysteine residue in E1, yielding a ubiquitin-E1 thioester and free AMP. Essential for the formation of radiation-induced foci, timely DNA repair and for response to replication stress. Promotes the recruitment of TP53BP1 and BRCA1 at DNA damage sites.

**Protein Details:** Recombinant UBA1 protein that includes full length of human UBA1 protein (accession number NP\_003325.2) was expressed in Sf9 cells and contains an N-terminal FLAG tag with a molecular weight of 119.12 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.

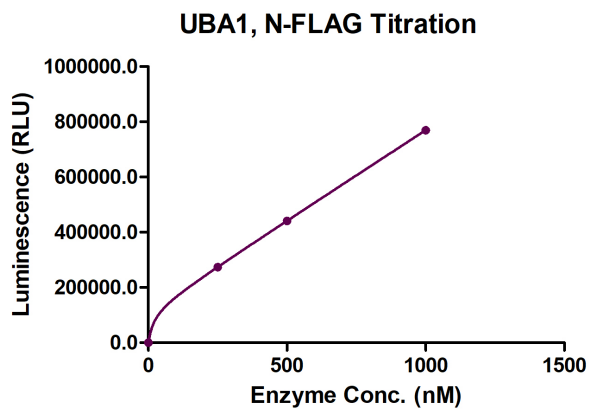


**Recombinant UBA1 protein gel.**

UBA1 protein was run on a 10% SDS-PAGE gel and stained with Coomassie Blue.

MW: 119.12 kDa

Purity: >95%



**AMP-Glo assay for UBA1 activity**

7.9  $\mu$ M ubiquitin and 25  $\mu$ M ATP were incubated with different concentrations of UBA1 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.