

**Catalog No:** 82008, 82608

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

**Quantity:** 100, 1000 µg

**Source:** Human

**Buffer Contents:** Recombinant STUB1 / CHIP protein is supplied in 25 mM Tris 8.0, 300mM NaCl, 20% glycerol, 0.5 mM TCEP.

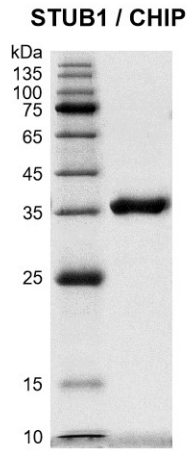
**Background: STUB1 (E3 ubiquitin-protein ligase CHIP)** also known as CHIP, HSPABP2, NY-CO-7, SCA48, SCAR16, SDCCAG7 and UBOX1. **STUB1** is a E3 ubiquitin-protein ligase which targets misfolded chaperone substrates towards proteasomal degradation. Ubiquitinates ICER-type isoforms of CREM and targets them for proteasomal degradation, thereby acts as a positive effector of MAPK/ERK-mediated inhibition of apoptosis in cardiomyocytes. Inhibits lipopolysaccharide-induced apoptosis and hypertrophy in cardiomyocytes, via ubiquitination and subsequent proteasomal degradation of NFATC3. Collaborates with ATXN3 in the degradation of misfolded chaperone substrates: ATXN3 restricting the length of ubiquitin chain attached to STUB1/CHIP substrates and preventing further chain extension. Ubiquitinates NOS1 in concert with Hsp70 and Hsp40. Modulates the activity of several chaperone complexes, including Hsp70, Hsc70 and Hsp90.

**Protein Details:** Recombinant STUB1 / CHIP protein that includes full length of human STUB1 protein (accession number NP\_005852.2) was expressed in *E. coli* and contains an N-terminal His tag with a molecular weight of 37.02 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.

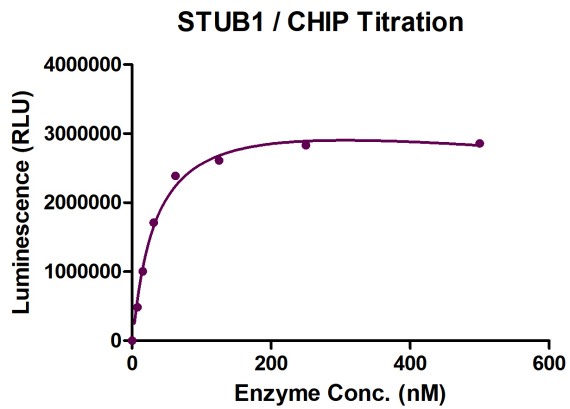


**Recombinant STUB1 / CHIP protein**

12.5% SDS-PAGE Coomassie staining

MW: 37.02 kDa,

Purity:  $\geq 95\%$



**ELISA for STUB1 / CHIP activity**

ELISA plate was coated with 50 ng HSC70 protein in each well. Then 63 nM UBA1, 1  $\mu$ M UBE2D1, 7.9  $\mu$ M Ubiquitin and 25  $\mu$ M ATP and different concentrations of STUB1 protein in 50  $\mu$ 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 were added in each well and incubated at 37°C for 1 hour. Anti-Ubiquitin (Cat.39741) antibody was used to detect reaction products.