SANTA CRUZ BIOTECHNOLOGY, INC.

UBA2 (H-155): sc-135248

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The small ubiquitin-related modifier protein SUMO-1 belongs to the ubiquitin-like protein family, which are synthesized as precursor proteins that undergo processing before conjugation to target proteins. However, SUMO and ubiquitin differ with respect to targeting. Ubiquitination predominantly targets proteins for degradation, whereas sumoylation targets proteins to a variety of cellular processes, including nuclear transport, transcriptional regulation, apoptosis and protein stability. SUMO-1 utilizes homologues of the E1 and E2 enzymes for conjugation to proteins, which include IκBα, MDM2, p53, PML and Ran GAP1. AOS1 is homologous to the N-terminal half of E1 and UBA2 is homologous to the C-terminal half of E1. These proteins form a heterodimer that activates SUMO-1.

REFERENCES

1. Okuma, T., et al. 1999. *In vitro* SUMO-1 modification requires two enzymatic steps, E1 and E2. Biochem. Biophys. Res. Commun. 254: 693-698.
2. Gong, L., et al. 1999. Molecular cloning and character the sentrin-activating enzyme complex. FEBS Lett. 448: 185-189.
3. Duprez, E., et al. 1999. SUMO-1 modification of the acute promyelocytic leukaemia protein PML: implications for nuclear localisation. J. Cell Sci. 112: 381-393.
4. Saitoh, H., et al. 2000. Functional heterogeneity of small ubiquitin-related protein modifiers SUMO-1 versus SUMO-2/3. J. Biol. Chem. 275: 6252-6258.
5. Schwienhorst, I., et al. 2000. SUMO conjugation and deconjugation. Mol. Gen. Genet. 263: 771-786.
6. Tatham, M.H., et al. 2001. Polymeric chains of SUMO-2 and SUMO-3 are conjugated to protein substrates by SAE1/SAE2 and Ubc9. J. Biol. Chem. 276: 35368-35374.

CHROMOSOMAL LOCATION

Genetic locus: UBA2 (human) mapping to 19q13.11; Uba2 (mouse) mapping to 7 B1.

SOURCE

UBA2 (H-155) is a rabbit polyclonal antibody raised against amino acids 138-292 mapping within an internal region of UBA2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

UBA2 (H-155) is recommended for detection of UBA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

UBA2 (H-155) is also recommended for detection of UBA2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for UBA2 siRNA (h): sc-61740, UBA2 siRNA (m): sc-61741, UBA2 shRNA Plasmid (h): sc-61740-SH, UBA2 shRNA Plasmid (m): sc-61741-SH, UBA2 shRNA (h) Lentiviral Particles: sc-61740-V and UBA2 shRNA (m) Lentiviral Particles: sc-61741-V.

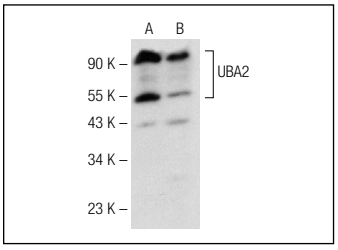
Molecular Weight of UBA2: 90 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



UBA2 (H-155): sc-135248. Western blot analysis of UBA2 expression in K-562 (**A**) and HeLa (**B**) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfaction Guaranteed

Try **UBA2 (B-6): sc-376305** or **UBA2 (28): sc-136359**, our highly recommended monoclonal alternatives to UBA2 (H-155).