SANTA CRUZ BIOTECHNOLOGY, INC.

HERPUD2 (D-12): sc-398583

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The endoplasmic reticulum (ER) stress response is triggered by the accumulation of unfolded proteins within the ER and is characterized by three events: the inhibition of translation (to prevent further protein accumulation), the up-regulated expression of polypeptide-folding proteins (known as the unfolded protein response or UPR) and the degradation of misfolded proteins by the ER-associated protein degradation (ERAD) system. Members of the homocysteine-inducible and ER stress-inducible ubiquitin-like domain families are components of the ERAD system and, via their ubiquitin-like domain, are thought to be involved in the destruction of misfolded proteins. HERPUD2 (homocysteine-responsive endoplasmic reticulum-resident ubiquitin-like domain member 2) is a 406 amino acid single-pass membrane protein containing one N-terminal ubiquitin-like domain. HERPUD2 is thought to be involved in the unfolded protein response (UPR) pathway.

REFERENCES

1. van Laar, T., et al. 2000. The novel MMS-inducible gene Mif1/KIAA0025 is a target of the unfolded protein response pathway. FEBS Lett. 469: 123-131.
2. Kokame, K., et al. 2000. Herp, a new ubiquitin-like membrane protein induced by endoplasmic reticulum stress. J. Biol. Chem. 275: 32846-32853.
3. Kokame, K., et al. 2001. Identification of ERSE-II, a new *cis*-acting element responsible for the ATF6-dependent mammalian unfolded protein response. J. Biol. Chem. 276: 9199-9205.
4. Sai, X., et al. 2002. Endoplasmic reticulum stress-inducible protein, Herp, enhances presenilin-mediated generation of Amyloid β-protein. J. Biol. Chem. 277: 12915-12920.

CHROMOSOMAL LOCATION

Genetic locus: HERPUD2 (human) mapping to 7p14.2; Herpud2 (mouse) mapping to 9 A4.

SOURCE

HERPUD2 (D-12) is a mouse monoclonal antibody raised against amino acids 145-202 mapping within an internal region of HERPUD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HERPUD2 (D-12) is available conjugated to agarose (sc-398583 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398583 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398583 PE), fluorescein (sc-398583 FITC), Alexa Fluor® 488 (sc-398583 AF488), Alexa Fluor® 546 (sc-398583 AF546), Alexa Fluor® 594 (sc-398583 AF594) or Alexa Fluor® 647 (sc-398583 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398583 AF680) or Alexa Fluor® 790 (sc-398583 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

HERPUD2 (D-12) is recommended for detection of HERPUD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for HERPUD2 siRNA (h): sc-89623, HERPUD2 siRNA (m): sc-145947, HERPUD2 shRNA Plasmid (h): sc-89623-SH, HERPUD2 shRNA Plasmid (m): sc-145947-SH, HERPUD2 shRNA (h) Lentiviral Particles: sc-89623-V and HERPUD2 shRNA (m) Lentiviral Particles: sc-145947-V.

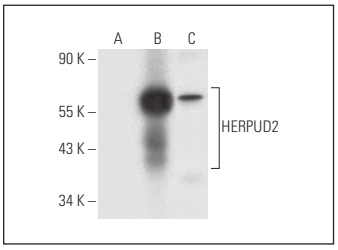
Molecular Weight of HERPUD2: 45 kDa.

Positive Controls: HERPUD2 (m): 293T Lysate: sc-120757 or A549 cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HERPUD2 (D-12): sc-398583. Western blot analysis of HERPUD2 expression in non-transfected 293T: sc-117752 (**A**), mouse HERPUD2 transfected 293T: sc-120757 (**B**) and A549 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fernández-Alfara, M., et al. 2023. Antitumor T-cell function requires CPEB4-mediated adaptation to chronic endoplasmic reticulum stress. EMBO J. 42: e111494.

RESEARCH USE

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