SANTA CRUZ BIOTECHNOLOGY, INC.

DERP6 (E-4): sc-514018

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DERP6 (dermal papilla-derived protein 6), also known as C17orf81, is a 316 amino acid protein that localizes to the cytoplasm and exists as multiple alternatively spliced isoforms. Expressed ubiquitously with highest expression in liver, heart, testis, brain and skeletal muscle, DERP6 is thought to be involved in p53-mediated transcriptional regulation. The gene encoding DERP6 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Yuan, J., et al. 2006. Cloning and characterization of the human gene DERP6, which activates transcriptional activities of p53. Mol. Biol. Rep. 33: 151-158.
2. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. Breast Dis. 27: 21-50.
3. Ropolo, A., et al. 2007. The pancreatitis-induced vacuole membrane protein 1 triggers autophagy in mammalian cells. J. Biol. Chem. 282: 37124-37133.

CHROMOSOMAL LOCATION

Genetic locus: ELP5 (human) mapping to 17p13.1; Elp5 (mouse) mapping to 11 B3.

SOURCE

DERP6 (E-4) is a mouse monoclonal antibody raised against amino acids 16-128 mapping near the N-terminus of DERP6 of human origin.

PRODUCT

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

DERP6 (E-4) is available conjugated to agarose (sc-514018 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514018 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514018 PE), fluorescein (sc-514018 FITC), Alexa Fluor® 488 (sc-514018 AF488), Alexa Fluor® 546 (sc-514018 AF546), Alexa Fluor® 594 (sc-514018 AF594) or Alexa Fluor® 647 (sc-514018 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514018 AF680) or Alexa Fluor® 790 (sc-514018 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

DERP6 (E-4) is recommended for detection of DERP6 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 DERP6 siRNA (h): sc-93638, DERP6 siRNA (m): sc-105289, DERP6 shRNA Plasmid (h): sc-93638-SH, DERP6 shRNA Plasmid (m): sc-105289-SH, DERP6 shRNA (h) Lentiviral Particles: sc-93638-V and DERP6 shRNA (m) Lentiviral Particles: sc-105289-V.

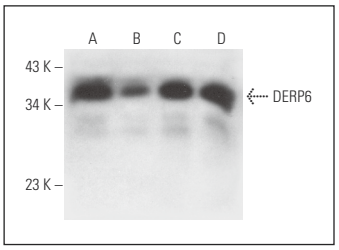
Molecular Weight of DERP6: 35 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257, MIA PaCa-2 cell lysate: sc-2285 or T98G cell lysate: sc-2294.

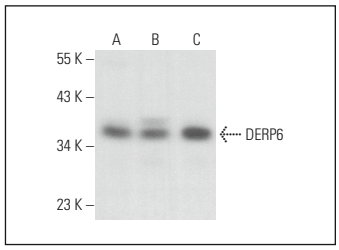
RECOMMENDED SUPPORT REAGENTS

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



DERP6 (E-4): sc-514018. Western blot analysis of DERP6 expression in T98G (**A**), Hep G2 (**B**), MIA PaCa-2 (**C**) and RT-4 (**D**) whole cell lysates.



DERP6 (E-4): sc-514018. Western blot analysis of DERP6 expression in Hep G2 (**A**), SJRH30 (**B**) and IMR-32 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xu, S., et al. 2019. Genome-wide CRISPR screen identifies ELP5 as a determinant of gemcitabine sensitivity in gallbladder cancer. Nat. Commun. 10: 5492.
2. Xu, S., et al. 2021. Epigenetic activation of the elongator complex sensitizes gallbladder cancer to gemcitabine therapy. J. Exp. Clin. Cancer Res. 40: 373.

RESEARCH USE

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