

# epsin 3 (P-16): sc-242624

## BACKGROUND

Epsin 3 (EPN3), also known as EPS-15-interacting protein 3, is a 632 amino acid member of the epsin protein family. Epsin 3 localizes mainly to the perinuclear region of the nucleus and in clathrin-coated vesicles close to the cell periphery. Epsin 3 is expressed in migrating keratinocytes from wounded skin, but not in normal skin or differentiating keratinocytes. Epsin 3 contains one ENTH (epsin N-terminal homology) domain and two UIM (ubiquitin-interacting motif) repeats and is expressed as two isoforms produced by alternative splicing. The gene that encodes epsin 3 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, 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

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
- Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
- Spradling, K.D., et al. 2001. Epsin 3 is a novel extracellular matrix-induced transcript specific to wounded epithelia. *J. Biol. Chem.* 276: 29257-29267.
- Minamoto, T., Buschmann, T., Habelhah, H., Matusevich, E., Tahara, H., Boerresen-Dale, A.L., Harris, C., Sidransky, D. and Ronai, Z. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
- Colland, F., et al. 2004. Functional proteomics mapping of a human signaling pathway. *Genome Res.* 14: 1324-1332.

## CHROMOSOMAL LOCATION

Genetic locus: EPN3 (human) mapping to 17q21.33; Epn3 (mouse) mapping to 11 D.

## SOURCE

epsin 3 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of epsin 3 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.

Blocking peptide available for competition studies, sc-242624 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

epsin 3 (P-16) is recommended for detection of epsin 3 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); non cross-reactive with epsin 1, epsin 2 or epsin 4.

epsin 3 (P-16) is also recommended for detection of epsin 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for epsin 3 siRNA (h): sc-93806, epsin 3 siRNA (m): sc-144915, epsin 3 shRNA Plasmid (h): sc-93806-SH, epsin 3 shRNA Plasmid (m): sc-144915-SH, epsin 3 shRNA (h) Lentiviral Particles: sc-93806-V and epsin 3 shRNA (m) Lentiviral Particles: sc-144915-V.

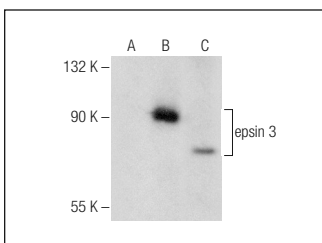
Molecular Weight of epsin 3 isoforms: 68/24 kDa.

Positive Controls: Rat pancreas tissue extract or epsin 3 (m): 293T Lysate: sc-125307.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



epsin 3 (P-16): sc-242624. Western blot analysis of epsin 3 expression in non-transfected: sc-117752 (A) and mouse epsin 3 transfected: sc-125307 (B) 293T whole cell lysates and rat pancreas tissue extract (C).

## STORAGE

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

## RESEARCH USE

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