

ENC1 (E-16): sc-107203

BACKGROUND

Proteolytic degradation by the ubiquitin (Ub) system is essential for normal cell cycle progression, cellular differentiation and stress responses. The E3 ubiquitin-protein ligase complex uses a substrate-specific adapter, ENC1 (ectoderm-neural cortex protein 1), to mediate ubiquitination. ENC1, also known as NRPB or PIG10, is a 589 amino acid actin-binding protein that is involved in differentiation of neural crest cells and regulation of neuronal process formation. ENC1 is localized to the nuclear matrix and is highly expressed in adult brain and spinal cord tissues. Expression of ENC1 is up-regulated during neuronal differentiation. ENC1 may be regulated by the β -catenin/TCF pathway and is thought to play a role in histogenesis. ENC1 interacts with hypophosphorylated Rb (retinoblastoma-associated protein) to form a complex that contains CUL-3, Rbx1 and ENC1 which is essential for neuronal cell differentiation. ENC1 contains one BTB (POZ) domain and six Kelch repeats. The BTB domain is thought to be necessary for the protein-protein interactions involved in cytoskeletal organization and the Kelch repeats denote a conserved tertiary structure. ENC1 is highly expressed in brain tumors, suggesting a possible role in carcinogenesis.

REFERENCES

1. Polyak, K., et al. 1997. A model for p53-induced apoptosis. *Nature* 389: 300-305.
2. Hernandez, M.C., et al. 1998. Cloning of human ENC1 and evaluation of its expression and regulation in nervous system tumors. *Exp. Cell Res.* 242: 470-477.
3. Kim, T.A., et al. 1998. NRP/B, a novel nuclear matrix protein, associates with p110(RB) and is involved in neuronal differentiation. *J. Cell Biol.* 141: 553-566.
4. Hernandez, M.C., et al. 1999. Assignment of the ectodermal-neural cortex 1 gene (ENC1) to human chromosome band 5q13 by *in situ* hybridization. *Cytogenet. Cell Genet.* 87: 89-90.
5. Hernandez, M., et al. 2000. Assignment of the ectodermal-neural cortex 1 gene (Enc1) to mouse chromosome band 13D1 by fluorescence *in situ* hybridization. *Cytogenet. Cell Genet.* 89: 158-159.
6. Fujita, M., et al. 2001. Upregulation of the ectodermal-neural cortex 1 (ENC1) gene, a downstream target of the β -catenin/T cell factor complex, in colorectal carcinomas. *Cancer Res.* 61: 7722-7726.

CHROMOSOMAL LOCATION

Genetic locus: ENC1 (human) mapping to 5q13.3; Enc1 (mouse) mapping to 13 D1.

SOURCE

ENC1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ENC1 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-107203 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ENC1 (E-16) is recommended for detection of ENC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ENC1 (E-16) is also recommended for detection of ENC1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ENC1 siRNA (h): sc-91870, ENC1 siRNA (m): sc-144649, ENC1 shRNA Plasmid (h): sc-91870-SH, ENC1 shRNA Plasmid (m): sc-144649-SH, ENC1 shRNA (h) Lentiviral Particles: sc-91870-V and ENC1 shRNA (m) Lentiviral Particles: sc-144649-V.

Molecular Weight of ENC1: 66 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

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) 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.

RESEARCH USE

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

PROTOCOLS

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