

EB3 (K-16): sc-22653

BACKGROUND

EB1 (MAPRE2, microtubule-associated protein, RP/EB family, member 2, EB2, RP1) may influence tumorigenesis of colorectal cancers and proliferative control of normal cells. EB1 may belong to the intermediate/early gene family, involved in the signal transduction cascade downstream of the TCR. Colorectal cancer is caused by the pathologic transformation of normal colonic epithelium to an adenomatous polyp, which can become an invasive cancer. APC (adenomatous polyposis coli) is a tumor suppressor gene, the mutation of which is one of the earliest events in colorectal carcinogenesis. A majority of the mutations result in the loss of the carboxy terminus of APC. EB1 has been shown to bind to the carboxy terminal region of APC, which implicates EB1 in APC suppression of colonic cancer. EB1 overexpression may play a role in the development of human esophageal squamous cell carcinoma (ESCC) by affecting APC function and activating the β -catenin/TCF pathway. EB3 is related to EB1 and likewise associates with the microtubule cytoskeleton. EB3 is expressed predominantly in the central nervous system and preferentially associates with APCL.

REFERENCES

- Cottrell, S., et al. 1992. Molecular analysis of APC mutations in familial adenomatous polyposis and sporadic colon carcinomas. *Lancet* 340: 626-630.
- Su, L.K., et al. 1993. Association of the APC tumor suppressor protein with catenins. *Science* 262: 1734-1737.
- Su, L.K., et al. 1995. APC binds to the novel protein EB1. *Cancer Res.* 55: 2972-2977.
- Nakagawa, H., et al. 1998. Identification of a brain-specific APC homologue, APCL, and its interaction with beta-catenin. *Cancer Res.* 58: 5176-5181.
- Morrison, E.E., et al. 1998. EB1, a protein which interacts with the APC tumour suppressor, is associated with the microtubule cytoskeleton throughout the cell cycle. *Oncogene* 17: 3471-3477.
- Berrueta, L., et al. 1998. The adenomatous polyposis coli-binding protein EB1 is associated with cytoplasmic and spindle microtubules. *Proc. Natl. Acad. Sci. USA* 95: 10596-10601.
- Nakagawa, H., et al. 2000. APCL, a central nervous system-specific homologue of adenomatous polyposis coli tumor suppressor, binds to p53-binding protein 2 and translocates it to the perinucleus. *Cancer Res.* 60: 101-105.

CHROMOSOMAL LOCATION

Genetic locus: MAPRE3 (human) mapping to 2p23.3, MAPRE2 (human) mapping to 18q12.1; Mapre2 (mouse) mapping to 18 A2.

SOURCE

EB3 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EB3 of human origin.

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-22653 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

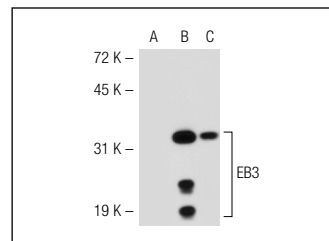
EB3 (K-16) is recommended for detection of EB3 of human origin and EB2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EB3 (K-16) is also recommended for detection of EB3 and EB2 in additional species, including equine, canine and porcine.

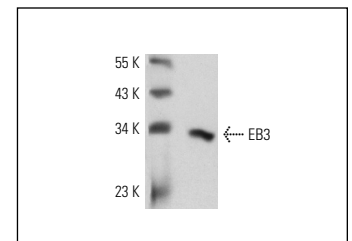
Molecular Weight of EB3: 32 kDa.

Positive Controls: mouse brain extract: sc-2253 or EB3 (m): 293T Lysate: sc-119900.

DATA



EB3 (K-16): sc-22653. Western blot analysis of EB3 expression in non-transfected: sc-117752 (A) and mouse EB3 transfected: sc-119900 (B) 293T whole cell lysates and mouse brain tissue extract (C).



EB3 (K-16): sc-22653. Western blot analysis of EB3 expression in mouse brain tissue extract.

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.

PROTOCOLS

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



Try **EB3 (7): sc-136405** or **EB3 (KT36): sc-101475**, our highly recommended monoclonal alternatives to EB3 (K-16).