SANTA CRUZ BIOTECHNOLOGY, INC.

EB1 (F-7): sc-374474

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

EB1 (end-binding protein 1), also known as microtubule-associated protein RP/EB family member 1 (MAPRE1) or APC-binding protein EB1, may influence tumorigenesis of colorectal cancers and proliferative control of normal cells. EB1 belongs to the intermediate/early gene family, involved in the signal transduction cascade downstream of the T cell receptor (TRC). 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 by affecting APC function and activating the β-catenin/TCF pathway.

CHROMOSOMAL LOCATION

Genetic locus: MAPRE1 (human) mapping to 20q11.21; Mapre1 (mouse) mapping to 2 H1.

SOURCE

EB1 (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 239-268 at the C-terminus of EB1 of human origin.

PRODUCT

Each vial contains 200 µg IgA kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374474 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

EB1 (F-7) is recommended for detection of EB1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EB1 (F-7) is also recommended for detection of EB1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for EB1 siRNA (h): sc-35258, EB1 siRNA (m): sc-35257, EB1 shRNA Plasmid (h): sc-35258-SH, EB1 shRNA Plasmid (m): sc-35257-SH, EB1 shRNA (h) Lentiviral Particles: sc-35258-V and EB1 shRNA (m) Lentiviral Particles: sc-35257-V.

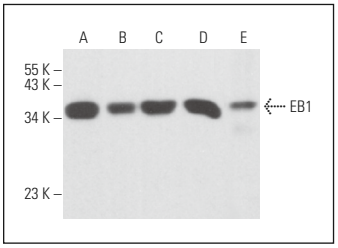
Molecular Weight of EB1: 30-38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, C6 whole cell lysate: sc-364373 or RAW 264.7 whole cell lysate: sc-2211.

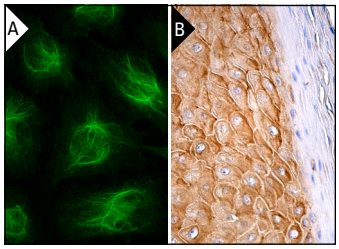
STORAGE

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

DATA



EB1 (F-7): sc-374474. Western blot analysis of EB1 expression in HeLa (**A**), NIH/3T3 (**B**), RAW 264.7 (**C**) and C6 (**D**) whole cell lysates and mouse brain tissue extract (**E**).



EB1 (F-7): sc-374474. Immunofluorescence staining of methanol-fixed Hela cells showing cytoskeletal localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Stolz, A., et al. 2015. A phenotypic screen identifies microtubule plus end assembly regulators that can function in mitotic spindle orientation. Cell Cycle 14: 827-837.
2. Tang, E.I., et al. 2015. EB1 regulates Tubulin and Actin cytoskeletal networks at the sertoli cell blood-testis barrier in male rats: an *in vitro* study. Endocrinology 156: 680-693.
3. Tang, E.I., et al. 2016. Coordination of Actin- and microtubule-based cytoskeletons supports transport of spermatids and residual bodies/phagosomes during spermatogenesis in the rat testis. Endocrinology 157: 1644-1659.
4. Kumar, M., et al. 2016. End binding 1 (EB1) overexpression in oral lesions and cancer: a biomarker of tumor progression and poor prognosis. Clin. Chim. Acta 459: 45-52.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **EB1 (1A11/4): sc-47704** for EB1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.