

EB1 (B-7): sc-398900

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.

REFERENCES

1. Cottrell, S., et al. 1992. Molecular analysis of APC mutations in familial adenomatous polyposis and sporadic colon carcinomas. *Lancet* 340: 626-630.
2. Su, L.K., et al. 1995. APC binds to the novel protein EB1. *Cancer Res.* 55: 2972-2977.
3. Tirnauer, J.S. and Bierer, B.E. 2000. EB1 proteins regulate microtubule dynamics, cell polarity, and chromosome stability. *J. Cell Biol.* 149: 761-766.
4. Slep, K.C., et al. 2005. Structural determinants for EB1-mediated recruitment of APC and spectraplakins to the microtubule plus end. *J. Cell Biol.* 168: 587-598.

CHROMOSOMAL LOCATION

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

SOURCE

EB1 (B-7) is a mouse monoclonal antibody raised against amino acids 133-202 mapping near the C-terminus of EB1 of human origin.

PRODUCT

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

EB1 (B-7) is available conjugated to agarose (sc-398900 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398900 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398900 PE), fluorescein (sc-398900 FITC), Alexa Fluor[®] 488 (sc-398900 AF488), Alexa Fluor[®] 546 (sc-398900 AF546), Alexa Fluor[®] 594 (sc-398900 AF594) or Alexa Fluor[®] 647 (sc-398900 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398900 AF680) or Alexa Fluor[®] 790 (sc-398900 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

EB1 (B-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 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).

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.

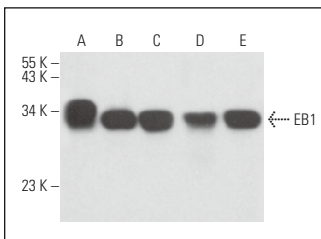
Molecular Weight of EB1: 30-38 kDa.

Positive Controls: SW480 cell lysate: sc-2219, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

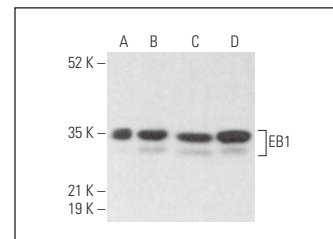
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



EB1 (B-7): sc-398900. Western blot analysis of EB1 expression in SW480 (A), NIH/3T3 (B), RAW 264.7 (C), C3H/10T1/2 (D) and C6 (E) whole cell lysates.



EB1 (B-7): sc-398900. Western blot analysis of EB1 expression in Ramos (A), A-431 (B), Jurkat (C) and HeLa (D) whole cell lysates.

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 for detailed protocols and support products.