SANTA CRUZ BIOTECHNOLOGY, INC.

Eps8 (F-8): sc-390257

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Elucidation of the mechanism by which receptor tyrosine kinases (RTKs) modulate cellular physiology in response to stimuli is critical to the understanding of growth regulation. Miscues in RTK signaling pathways can result in cellular transformation and ultimately in cancer. Two novel EGF receptor substrates designated EGF-receptor pathway substrates 8 and 15, or Eps8 and Eps15, have been described. Eps8 and Eps15 become tyrosine phosphorylated subsequent to EGF stimulation. Overexpression of Eps15 in NIH/3T3 cells causes cellular transformation, implying involvement in the regulation of cell proliferation. Eps15 is capable of binding the amino-terminal portion of Crk via a conserved proline-rich domain, characteristic of all Crk binding proteins. Overexpression of Eps8 in both fibroblasts and hematopoietic cells results in an increased mitogenic response to EGF. Eps8 has been shown to associate with the EGF receptor despite its lack of a functional SH2 domain. Further characterization suggests the protein has both a PH domain and a SH3 domain, the functional significance of which are not yet known.

REFERENCES

1. Reynolds, F.H., Jr., et al. 1981. Human transforming growth factors induces tyrosine phosphorylation of EGF receptors. Nature 292: 259-262.
2. Ciardiello, F., et al. 1991. Differential expression of epidermal growth factor-related proteins in human colorectal tumors. Proc. Natl. Acad. Sci. USA 88: 7792-7796.
3. Fazioli, F., et al. 1993. Eps8, a substrate for the epidermal growth factor receptor kinase, enhances EGF-dependent mitogenic signals. EMBO J. 12: 3799-3808.
4. Fazioli, F., et al. 1993. Eps15, a novel tyrosine kinase substrate, exhibits transforming activity. Mol. Cell. Biol. 13: 5814-5828.

CHROMOSOMAL LOCATION

Genetic locus: EPS8 (human) mapping to 12p12.3; Eps8 (mouse) mapping to 6 G1.

SOURCE

Eps8 (F-8) is a mouse monoclonal antibody raised against amino acids 583-821 of Eps8 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Eps8 (F-8) is available conjugated to agarose (sc-390257 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390257 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390257 PE), fluorescein (sc-390257 FITC), Alexa Fluor® 488 (sc-390257 AF488), Alexa Fluor® 546 (sc-390257 AF546), Alexa Fluor® 594 (sc-390257 AF594) or Alexa Fluor® 647 (sc-390257 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390257 AF680) or Alexa Fluor® 790 (sc-390257 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

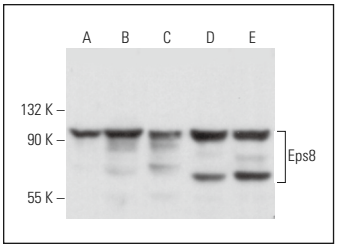
Eps8 (F-8) is recommended for detection of Eps8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Eps8 siRNA (h): sc-40503, Eps8 siRNA (m): sc-40504, Eps8 shRNA Plasmid (h): sc-40503-SH, Eps8 shRNA Plasmid (m): sc-40504-SH, Eps8 shRNA (h) Lentiviral Particles: sc-40503-V and Eps8 shRNA (m) Lentiviral Particles: sc-40504-V.

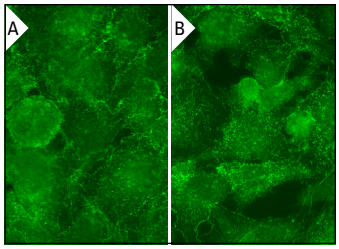
Molecular Weight of Eps8: 97 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, NIH/3T3 whole cell lysate: sc-2210 or Hep G2 cell lysate: sc-2227.

DATA



Eps8 (F-8): sc-390257. Western blot analysis of Eps8 expression in MCF7 (**A**), Hep G2 (**B**), J774.A1 (**C**), NIH/3T3 (**D**) and EOC 20 (**E**) whole cell lysates.



Eps8 (F-8): sc-390257. Immunofluorescence staining of formalin-fixed 3T3-L1 (**A**) and NIH/3T3 (**B**) cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Chen, L., et al. 2017. Transcriptomes of major renal collecting duct cell types in mouse identified by single-cell RNA-seq. Proc. Natl. Acad. Sci. USA 114: E9989-E9998.
2. Zhu, Y., et al. 2021. MLK3 is associated with poor prognosis in patients with glioblastomas and Actin cytoskeleton remodeling in glioblastoma cells. Front. Oncol. 10: 600762.

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.