SANTA CRUZ BIOTECHNOLOGY, INC.

Radical Fringe (18-K2): sc-100754

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Three mammalian fringe family members, Manic, Radical and Lunatic Fringe, have been identified as proteins related to Drosophila fringe, a protein involved in development. Fringe proteins act upstream of the Notch signaling pathway and are involved in boundary determination during segmentation. Each mammalian fringe displays different patterns of expression, though all are expressed in the mouse embryo as well as in many adult tissues. Radical fringe plays a key role in the development of the limb bud. Lunatic fringe is required for normal somite segmentation and patterning and is thought to be a target of the molecular clock. Manic fringe, also involved in somatic development, has been shown to render mouse NIH/3T3 cells tumorigenic in SCID mice.

REFERENCES

1. May, W.A., et al. 1997. EWS/FLI1-induced manic fringe renders NIH 3T3 cells tumorigenic. Nat. Genet. 17: 495-497.
2. Laufer, E., et a;. 1997. Expression of Radical fringe in limb-bud ectoderm regulates apical ectodermal ridge formation. Nature 386: 366-373.
3. Johnston, S.H., et al. 1997. A family of mammalian Fringe genes implicated in boundary determination and the Notch pathway. Development 124: 2245-2254.
4. May, W.A., et al. 1997. EWS/FLI1-induced manic fringe renders NIH 3T3 cells tumorigenic. Nat. Genet. 17: 495-497.
5. Cohen, B., et al. 1997. Fringe boundaries coincide with Notch-dependent patterning centres in mammals and alter Notch-dependent development in Drosophila. Nat. Genet. 16: 283-288.
6. Thelu, J., et al. 1998. Differential expression pattern of the three fringe genes is associated with epidermal differentiation. J. Invest. Dermatol. 111: 903-906.
7. Evrard, Y.A., et al. 1998. Lunatic fringe is an essential mediator of somite segmentation and patterning. Nature 394: 377-381.
8. McGrew, M.J., et al. 1998. The lunatic fringe gene is a target of the molecular clock linked to somite segmentation in avian embryos. Curr. Biol. 8: 979-982.

CHROMOSOMAL LOCATION

Genetic locus: RFNG (human) mapping to 17q25.3.

SOURCE

Radical Fringe (18-K2) is a mouse monoclonal antibody raised against recombinant Radical Fringe of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Radical Fringe (18-K2) is recommended for detection of Radical Fringe of human origin by Western Blotting (starting dilution 1:200, 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 Radical Fringe siRNA (h): sc-39494, Radical Fringe shRNA Plasmid (h): sc-39494-SH and Radical Fringe shRNA (h) Lentiviral Particles: sc-39494-V.

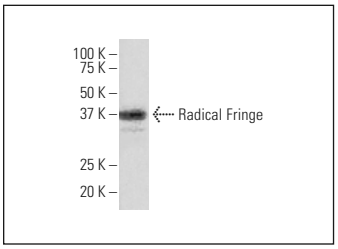
Molecular Weight of Radical Fringe: 36 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

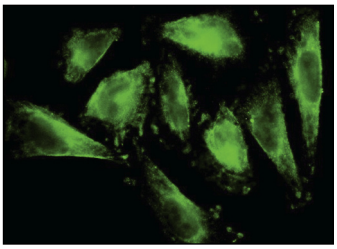
RECOMMENDED SUPPORT REAGENTS

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



Radical Fringe (18-K2): sc-100754. Western blot analysis of Radical Fringe expression in Hep G2 whole cell lysate.



Radical Fringe (18-K2): sc-100754. Immunofluorescence staining of paraformaldehyde-fixed Hep G2 cells showing cytoplasmic localization.

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.