SANTA CRUZ BIOTECHNOLOGY, INC.

Radical Fringe (C-14): sc-324261

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, also known as β-1,3-N-acetylglucosaminyltransferase Radical Fringe, is a 331 amino acid single-pass type II membrane protein that localizes to the membrane of the Golgi apparatus. Playing a key role in the development of the limb bud, Radical Fringe transfers a β-D-GlcNAc residue from UDP-D-GlcNAc to the fucose residue of a fucosylated protein acceptor. 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 al. 1997. Expression of Radical fringe in limb-bud ectoderm regulates apical ectodermal ridge formation. Nature 386: 366-373. Published erratum in: Nature 388: 400.
3. Johnston, S.H., et al. 1997. A family of mammalian Fringe genes implicated in boundary determination and the Notch pathway. Development124: 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 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Radical Fringe of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324261 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Radical Fringe (C-14) is recommended for detection of Radical Fringe of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Lunatic Fringe or Manic Fringe.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.