SANTA CRUZ BIOTECHNOLOGY, INC.

Raftlin (E-11): sc-514457

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The Power to Question

BACKGROUND

Membrane microdomains known as lipid rafts are implicated in B cell activation during B cell receptor (BCR) signal initiation. Raftlin, also known as RFTN1 (Raftlin, lipid raft linker 1), cell migration-inducing gene 2 protein, PIB10, PIG9 or MIG2, is a 578 amino acid cell membrane protein and lipid anchor that is essential for raft cell assembly and maintenance. A member of the Raftlin family, Raftlin modulates B cell antigen receptor-mediated signaling, TCR signals, and is involved in T cell-mediated immune responses. The gene encoding Raftlin maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. J. Neurol. Neurosurg. Psychiatr. 62: 570-573.
2. Maho, A., et al. 1999. Mapping of the CCXCR1, CX3CR1, CCBP2 and CCR9 genes to the CCR cluster within the 3p21.3 region of the human genome. Cytogenet. Cell Genet. 87: 265-268.
3. Saeki, K., et al. 2003. The B cell-specific major raft protein, Raftlin, is necessary for the integrity of lipid raft and BCR signal transduction. EMBO J. 22: 3015-3026.
4. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
5. Pfeifer, G.P. and Dammann, R. 2005. Methylation of the tumor suppressor gene RASSF1A in human tumors. Biochemistry 70: 576-583.

CHROMOSOMAL LOCATION

Genetic locus: Rftn1 (mouse) mapping to 17 C.

SOURCE

Raftlin (E-11) is a mouse monoclonal antibody raised against amino acids 29-328 mapping within an internal region of Raftlin of mouse origin.

PRODUCT

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

Raftlin (E-11) is available conjugated to agarose (sc-514457 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514457 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514457 PE), fluorescein (sc-514457 FITC), Alexa Fluor® 488 (sc-514457 AF488), Alexa Fluor® 546 (sc-514457 AF546), Alexa Fluor® 594 (sc-514457 AF594) or Alexa Fluor® 647 (sc-514457 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514457 AF680) or Alexa Fluor® 790 (sc-514457 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Raftlin (E-11) is recommended for detection of Raftlin of mouse 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 Raftlin siRNA (m): sc-152681, Raftlin shRNA Plasmid (m): sc-152681-SH and Raftlin shRNA (m) Lentiviral Particles: sc-152681-V.

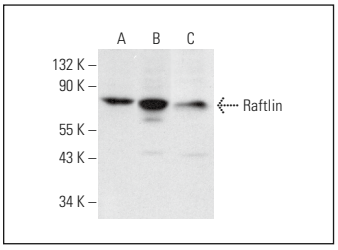
Molecular Weight of Raftlin: 63 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, CTLL-2 cell lysate: sc-2242 or SP2/0 whole cell lysate: sc-364795.

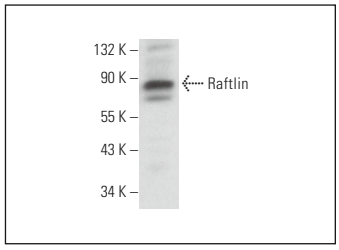
RECOMMENDED SUPPORT REAGENTS

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



Raftlin (E-11): sc-514457. Western blot analysis of Raftlin expression in CTLL-2 (**A**), 3T3-L1 (**B**) and SP2/0 (**C**) whole cell lysates.



Raftlin (E-11): sc-514457. Western blot analysis of Raftlin expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Singh, A.K., et al. 2023. RORγt-Raftlin1 complex regulates the pathogenicity of Th17 cells and colonic inflammation. Nat. Commun. 14: 4972.

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.

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