SANTA CRUZ BIOTECHNOLOGY, INC.

PPEF-2 (41): sc-293044

BACKGROUND

PPEF-2 (protein phosphatase, EF-hand calcium binding domain 2) belongs to the serine/threonine protein phosphatase/EF-hand motif family and influences normal function of the visual system. PPEF family members appear to play specific roles in multiple types of sensory neurons and may act as markers for sensory neuron differentiation. A 3.7-kb PPEF-2 mRNA is detectable in rat retina. PPEF-2 expression appears to be exclusive to the inner segments of the photoreceptor cells of the retina and in the pineal gland. PPEF-2 contains a protein phosphatase catalytic domain, and at least two EF-hand calcium-binding motifs in its C terminus. PPEF-2 shares high sequence similarity with the *Drosophila* retinal degeneration C (rdgC) gene.

REFERENCES

1. Sherman, P.M., et al. 1997. Identification and characterization of a conserved family of protein serine/threonine phosphatases homologous to *Drosophila* retinal degeneration C. Proc. Natl. Acad. Sci. USA 94: 11639-11644.
2. Montini, E., et al. 1997. A novel human serine-threonine phosphatase related to the *Drosophila* retinal degeneration C (rdgC) gene is selectively expressed in sensory neurons of neural crest origin. Hum. Mol. Genet. 6: 1137-1145.
3. van de Vosse, E., et al. 1997. Exclusion of PPEF as the gene causing X-linked juvenile retinoschisis. Hum. Genet. 101: 235-237.
4. Kutuzov, M.A., et al. 1998. Expression and characterization of PP7, a novel plant protein Ser/Thr phosphatase distantly related to RdgC/PPEF and PP5. FEBS Lett. 440: 147-152.
5. Andreeva, A.V., et al. 1999. RdgC/PP5-related phosphatases: novel components in signal transduction. Cell. Signal. 11: 555-562.
6. Ramulu, P., et al. 2001. Normal light response, photoreceptor integrity, and rhodopsin dephosphorylation in mice lacking both protein phosphatases with EF hands (PPEF-1 and PPEF-2). Mol. Cell. Biol. 21: 8605-8614.

CHROMOSOMAL LOCATION

Genetic locus: PPEF2 (human) mapping to 4q21.1; Ppef2 (mouse) mapping to 5 E2.

SOURCE

PPEF-2 (41) is a mouse monoclonal antibody raised against amino acids 614-730 of PPEF-2 of human 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.

PPEF-2 (41) is available conjugated to agarose (sc-293044 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-293044 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-293044 PE), fluorescein (sc-293044 FITC), Alexa Fluor® 488 (sc-293044 AF488), Alexa Fluor® 594 (sc-293044 AF594) or Alexa Fluor® 647 (sc-293044 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-293044 AF680) or Alexa Fluor® 790 (sc-293044 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PPEF-2 (41) is recommended for detection of the long form of PPEF-2 of mouse, rat and 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PPEF-2 siRNA (h): sc-39154, PPEF-2 siRNA (m): sc-39155, PPEF-2 shRNA Plasmid (h): sc-39154-SH, PPEF-2 shRNA Plasmid (m): sc-39155-SH, PPEF-2 shRNA (h) Lentiviral Particles: sc-39154-V and PPEF-2 shRNA (m) Lentiviral Particles: sc-39155-V.

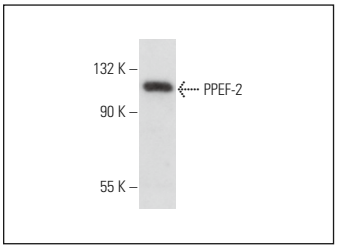
Molecular Weight of PPEF-2 long form: 97 kDa.

Positive Controls: U266 whole cell lysate: sc-364800 or rat eye extract: sc-364805.

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



PPEF-2 (41): sc-293044. Western blot analysis of PPEF-2 expression in U266 whole cell lysate.

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.