

peropsin (K-12): sc-46612

BACKGROUND

The opsins are important proteins in the visual/irradiance detection cycle where they utilise a retinaldehyde chromophore in their photoisomerase role. Visual pigment-like receptor peropsin, also designated retinal pigment epithelium-derived rhodopsin homologue (RRH), belongs to the opsin subfamily of the larger G protein-coupled receptor 1 family. Peropsin is an integral membrane protein that is crucial to retinal pigment epithelial physiology. It monitors the concentration of retinoids or detects light directly. Peropsin is detected exclusively in the eye, where it localizes to the microvilli surrounding the photoreceptor outer segments of the retinal pigment epithelium.

REFERENCES

1. Sun, H., et al. 1997. Peropsin, a novel visual pigment-like protein located in the apical microvilli of the retinal pigment epithelium. *Proc. Natl. Acad. Sci. USA* 94: 9893-9898.
2. Chen, P., et al. 2001. A photic visual cycle of rhodopsin regeneration is dependent on RGR. *Nat. Genet.* 28: 256-260.
3. Tarttelin, E.E., et al. 2003. Expression of opsin genes early in ocular development of humans and mice. *Exp. Eye Res.* 76: 393-396.
4. Bellingham, J., et al. 2003. In silico characterisation and chromosomal localisation of human RRH (peropsin)-implications for opsin evolution. *BMC. Genomics* 4: 3.
5. Terakita, A., et al. 2005. The opsins. *Genome Biol.* 6: 213.
6. Kumbalasingi, T., et al. 2005. Melanopsin and other novel mammalian opsins. *Exp. Eye Res.* 81: 368-375.

CHROMOSOMAL LOCATION

Genetic locus: RRH (human) mapping to 4q25; Rrh (mouse) mapping to 3 G3.

SOURCE

peropsin (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of peropsin 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-46612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

peropsin (K-12) is recommended for detection of peropsin of mouse, rat and 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).

peropsin (K-12) is also recommended for detection of peropsin in additional species, including canine.

Suitable for use as control antibody for peropsin siRNA (h): sc-45795, peropsin siRNA (m): sc-45796, peropsin shRNA Plasmid (h): sc-45795-SH, peropsin shRNA Plasmid (m): sc-45796-SH, peropsin shRNA (h) Lentiviral Particles: sc-45795-V and peropsin shRNA (m) Lentiviral Particles: sc-45796-V.

Molecular Weight of peropsin: 38 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.