SANTA CRUZ BIOTECHNOLOGY, INC.

OA1 (N-16): sc-47261

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G protein-coupled receptors (GPRs or GPCRs), are members of the largest protein family and play a role in many different stimulus-response pathways. G protein-coupled receptors mediate extracellular signals into intracellular signals (G protein-activation). They respond to a great variety of signaling molecules, including hormones, neurotransmitters and other proteins and peptides. GPR143, also designated ocular albinism type 1 protein (OA1), is detected exclusively in pigment cells. OA1, which is a multi-pass membrane protein, is a melanosomal protein expressed primarily in pigment cells. Defects in the gene encoding for OA1 cause ocular albinism, an X-linked disorder mainly characterized by retinal hypopigmentation and visual impairment.

REFERENCES

1. Schiaffino, M.V., et al. 1996. Analysis of the OA1 gene reveals mutations in only one-third of patients with X-linked ocular albinism. Hum. Mol. Genet. 4: 2319-2325.
2. Schiaffino, M.V., et al. 1999. Ocular albinism: eviden system. Nat. Genet. 23: 108-112.
3. Oetting, W.S. and King, R.A. 1999. Molecular basis of albinism: mutations and polymorphisms of pigmentation genes associated with albinism. Hum. Mutat. 13: 99-115.
4. Rosenberg, T. and Schwartz, M. 1999. X-linked ocular albinism: prevalence and mutations—a national study. Eur. J. Hum. Genet. 6: 570-577.
5. Bassi, M.T., et al. 2001. Diverse prevalence of large deletions within the OA1 gene in ocular albinism type 1 patients from Europe and North America. Hum. Genet. 108: 51-54.
6. Oetting, W.S. 2002. New insights into ocular albinism type 1 (OA1): Mutations and polymorphisms of the OA1 gene. Hum. Mutat. 19: 85-92.
7. Vetrini, F., et al. 2004. The microphthalmia transcription factor (Mitf) controls expression of the ocular albinism type 1 gene: link between melanin synthesis and melanosome biogenesis. Mol. Cell. Biol. 24: 6550-6559.

CHROMOSOMAL LOCATION

Genetic locus: GPR143 (human) mapping to Xp22.3.

SOURCE

OA1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of OA1 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-47261 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.

APPLICATIONS

OA1 (N-16) is recommended for detection of OA1 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).

Suitable for use as control antibody for OA1 siRNA (h): sc-61239, OA1 shRNA Plasmid (h): sc-61239-SH and OA1 shRNA (h) Lentiviral Particles: sc-61239-V.

Molecular Weight of OA1 glycoprotein: 60 kDa.

Molecular Weight of OA1 unglycosylated precursor: 45-48 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.

PROTOCOLS

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