

# OA1 (C-6): sc-398602

## 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. 1995. 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. Rosenberg, T. and Schwartz, M. 1998. X-linked ocular albinism: prevalence and mutations—a national study. *Eur. J. Hum. Genet.* 6: 570-577.
3. Schiaffino, M.V., et al. 1999. Ocular albinism: eviden system. *Nat. Genet.* 23: 108-112.
4. 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.

## CHROMOSOMAL LOCATION

Genetic locus: GPR143 (human) mapping to Xp22.2; Gpr143 (mouse) mapping to X F3.

## SOURCE

OA1 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 97-126 near the N-terminus of OA1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OA1 (C-6) is available conjugated to agarose (sc-398602 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398602 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398602 PE), fluorescein (sc-398602 FITC), Alexa Fluor® 488 (sc-398602 AF488), Alexa Fluor® 546 (sc-398602 AF546), Alexa Fluor® 594 (sc-398602 AF594) or Alexa Fluor® 647 (sc-398602 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398602 AF680) or Alexa Fluor® 790 (sc-398602 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398602 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

OA1 (C-6) is recommended for detection of OA1 of mouse, rat and human 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 OA1 siRNA (h): sc-61239, OA1 siRNA (m): sc-61240, OA1 shRNA Plasmid (h): sc-61239-SH, OA1 shRNA Plasmid (m): sc-61240-SH, OA1 shRNA (h) Lentiviral Particles: sc-61239-V and OA1 shRNA (m) Lentiviral Particles: sc-61240-V.

Molecular Weight of OA1 glycoprotein: 60 kDa.

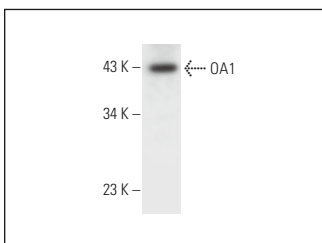
Molecular Weight of unglycosylated OA1 precursor: 45-48 kDa.

Positive Controls: human prostate extract: sc-363774.

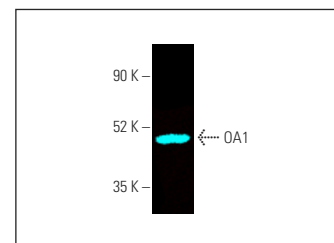
## RECOMMENDED SUPPORT REAGENTS

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



OA1 (C-6): sc-398602. Western blot analysis of OA1 expression in human prostate tissue extract.



OA1 (C-6): sc-398602. Fluorescent western blot analysis of OA1 expression in human prostate tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>2a</sub> BP-CFL 647: sc-542738.

## 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](http://www.scbt.com) for detailed protocols and support products.