

OPA1 (C-15): sc-30573

BACKGROUND

OPA1 (optic atrophy 1 gene protein), belongs to the Dynamin family. The gene encoding OPA1 localizes to 3q29, is targeted to mitochondria and is involved in mitochondrial biogenesis. Defects in OPA1 are a cause of optic atrophy type 1. OPA1 is mostly expressed in retina but can also be expressed in brain, testis, heart and skeletal muscles.

REFERENCES

- Jonasdottir, A., et al. 1999. Refinement of the dominant optic atrophy locus (OPA1) to a 1.4-cM interval on chromosome 3q28-3q29, within a 3-Mb YAC contig. *Hum. Genet.* 99: 115-120.
- Delettre, C., et al. 2000. Nuclear gene OPA1, encoding a mitochondrial dynamin-related protein, is mutated in dominant optic atrophy. *Nat. Genet.* 26: 207-210.

CHROMOSOMAL LOCATION

Genetic locus: OPA1 (human) mapping to 3q29; Opa1 (mouse) mapping to 16 B2.

SOURCE

OPA1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of OPA1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30573 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

OPA1 (C-15) is recommended for detection of OPA1 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)], 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).

OPA1 (C-15) is also recommended for detection of OPA1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for OPA1 siRNA (h): sc-106808, OPA1 siRNA (m): sc-151306, OPA1 shRNA Plasmid (h): sc-106808-SH, OPA1 shRNA Plasmid (m): sc-151306-SH, OPA1 shRNA (h) Lentiviral Particles: sc-106808-V and OPA1 shRNA (m) Lentiviral Particles: sc-151306-V.

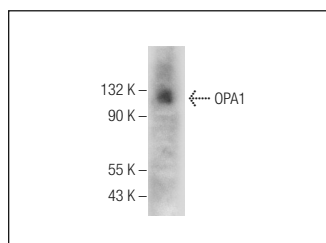
Molecular Weight of OPA1: 120 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Ramos cell lysate: sc-2216.

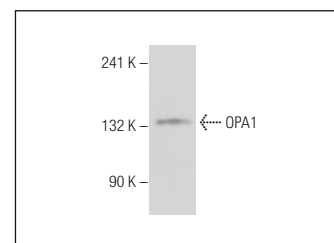
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



OPA1 (C-15): sc-30573. Western blot analysis of OPA1 expression in Ramos whole cell lysate.



OPA1 (C-15): sc-30573. Western blot analysis of OPA1 expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

- Thiyagarajan, P., et al. 2011. Dietary chlorophyllin inhibits the canonical NFκB signaling pathway and induces intrinsic apoptosis in a hamster model of oral oncogenesis. *Food Chem. Toxicol.* 50: 867-876.
- Anitha, P., et al. 2013. Ellagic acid coordinately attenuates Wnt/β-catenin and NFκB signaling pathways to induce intrinsic apoptosis in an animal model of oral oncogenesis. *Eur. J. Nutr.* 52: 75-84.
- Parameyong, A., et al. 2013. Melatonin attenuates methamphetamine-induced disturbances in mitochondrial dynamics and degeneration in neuroblastoma SH-SY5Y cells. *J. Pineal Res.* 55: 313-323.
- Khraiwesh, H., et al. 2013. Alterations of ultrastructural and fission/fusion markers in hepatocyte mitochondria from mice following calorie restriction with different dietary fats. *J. Gerontol. A Biol. Sci. Med. Sci.* 68: 1023-1034.

RESEARCH USE

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



Try **OPA1 (D-9): sc-393296**, our highly recommended monoclonal alternative to OPA1 (C-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **OPA1 (D-9): sc-393296**.