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

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

SOURCE
OPA1 (H-134) is a rabbit polyclonal antibody raised against amino acids 647-780 mapping within an internal region of OPA1 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.

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.

APPLICATIONS
OPA1 (H-134) 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 (H-134) is also recommended for detection of OPA1 in additional species, including equine, canine and bovine.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA
![Western blot analysis of OPA1 expression in NIH/3T3 whole cell lysate (A) and mouse brain tissue extract (B).](image)

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

TRY OPA1 (D-9): sc-393296, our highly recommended monoclonal alternative to OPA1 (H-134). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see OPA1 (D-9): sc-393296.