# SANTA CRUZ BIOTECHNOLOGY, INC.

# MITD1 (C-13): sc-137604



## BACKGROUND

MITD1 (MIT, microtubule interacting and transport, domain containing 1) is a 249 amino acid peripheral membrane protein that localizes to the cytoplasmic side of late endosomes, where it is implicated in endosomal protein transport. MITD1 interacts with CHMP2 and CHMP1B, and is encoded by a gene that maps to human chromosome 2q11.2. As the second largest human chromosome, chromosome 2 consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene.

## REFERENCES

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- 3. Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the Sitosterolemia locus. Cytogenet. Cell Genet. 92: 204-208.
- Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. Nat. Genet. 31: 79-83.
- Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. Am. J. Hum. Genet. 76: 794-803.
- Tsang, H.T., et al. 2006. A systematic analysis of human CHMP protein interactions: additional MIT domain-containing proteins bind to multiple components of the human ESCRT III complex. Genomics 88: 333-346.
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#### CHROMOSOMAL LOCATION

Genetic locus: MITD1 (human) mapping to 2q11.2; Mitd1 (mouse) mapping to 1 B.

#### SOURCE

MITD1 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MITD1 of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137604 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

MITD1 (C-13) is recommended for detection of MITD1 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).

MITD1 (C-13) is also recommended for detection of MITD1 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for MITD1 siRNA (h): sc-94910, MITD1 siRNA (m): sc-149444, MITD1 shRNA Plasmid (h): sc-94910-SH, MITD1 shRNA Plasmid (m): sc-149444-SH, MITD1 shRNA (h) Lentiviral Particles: sc-94910-V and MITD1 shRNA (m) Lentiviral Particles: sc-149444-V.

Molecular Weight of MITD1: 29 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) Immunofluo-rescence: 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.

#### **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 or our catalog for detailed protocols and support products.