SANTA CRUZ BIOTECHNOLOGY, INC.

# NDUFAF7 (D-14): sc-137345

## BACKGROUND

NDUFAF7 (NADH dehydrogenase (ubiquinone) complex I, assembly factor 7), also known as MidA, C2orf56 or PRO1853, is a 441 amino acid protein. Localizing to the mitochrondia, NDUFAF7 is involved in the assembly of the mitochondrial NADH:ubiquinone oxidoreductase complex (complex I). NDUFAF7 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 2p22.2 and mouse chromosome 17 E3. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare 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 related to mutations in the ALMS1 gene.

## REFERENCES


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2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ich-thyosis gene. J. Invest. Dermatol. 126: 2408-2413.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.
6. Marshall, J.D., et al. 2007. Alström syndrome. Eur. J. Hum. Genet. 15: 1193-1202.
7. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype cor-relations in Alström syndrome. Hum. Mutat. 28: 1114-1123.
8. Tabas, I. 2007. A two-carbon switch to sterol-induced autophagic death. Autophagy 3: 38-41.


## CHROMOSOMAL LOCATION

Genetic locus: NDUFAF7 (human) mapping to 2p22.2; Ndufaf7 (mouse) mapping to 17 E3.

## SOURCE

NDUFAF7 (D-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NDUFAF7 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-137345 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NDUFAF7 (D-14) is recommended for detection of NDUFAF7 or mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other NDUFAF family members.

NDUFAF7 (D-14) is also recommended for detection of NDUFAF7 in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for NDUFAF7 siRNA (h): sc-94485, NDUFAF7 siRNA (m): sc-108752, NDUFAF7 shRNA Plasmid (h): sc-94485-SH, NDUFAF7 shRNA Plasmid (m): sc-108752-SH, NDUFAF7 shRNA (h) Lentiviral Particles: sc-94485-V and NDUFAF7 shRNA (m) Lentiviral Particles: sc-108752-V.

Molecular Weight of NDUFAF7 isoforms: 49/38 kDa.

## 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) 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.

## 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.