

NDUFA1 (T-13): sc-131625

BACKGROUND

NDUFA1 (NADH dehydrogenase (ubiquinone) 1 α subcomplex, 1), also known as ZNF183 or MWFE, is one of about 45 subunits comprising Complex I of the oxidative phosphorylation electron transport chain. Consisting of 70 amino acids and expressed predominantly in skeletal muscle and heart, NDUFA1 functions as an accessory subunit of the multi-protein mitochondrial membrane respiratory chain NADH dehydrogenase complex (known as Complex I). Complex I plays an important role in the transfer of electrons from NADH to the respiratory chain, a process that is essential for cellular respiration. As a single-pass membrane protein, NDUFA1 localizes to the matrix side of the mitochondrial inner membrane and is a member of the complex I NDUFA1 subunit family. The gene encoding NDUFA1 maps to human chromosome Xq24 and mouse chromosome X A2. NDUFA1 defects may cause mitochondrial Complex I deficiency, a mitochondrial disorder with wide symptoms ranging from cardiomyopathy, myopathy, liver disease and neurological disorders.

REFERENCES

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3. Gaikwad, J.S., et al. 2001. Identification of tooth-specific downstream targets of Runx2. *Gene* 279: 91-97.
4. Yadava, N., et al. 2002. Species-specific and mutant MWFE proteins. Their effect on the assembly of a functional mammalian mitochondrial complex I. *J. Biol. Chem.* 277: 21221-21230.
5. Qi, X., et al. 2004. SOD2 gene transfer protects against optic neuropathy induced by deficiency of complex I. *Ann. Neurol.* 56: 182-191.
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CHROMOSOMAL LOCATION

Genetic locus: NDUFA1 (human) mapping to Xq24.

SOURCE

NDUFA1 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDUFA1 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131625 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDUFA1 (T-13) is recommended for detection of NDUFA1 of human and rat 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); non cross-reactive with other NDUFA family members.

NDUFA1 (T-13) is also recommended for detection of NDUFA1 in additional species, including equine and canine.

Suitable for use as control antibody for NDUFA1 siRNA (h): sc-90892, NDUFA1 shRNA Plasmid (h): sc-90892-SH and NDUFA1 shRNA (h) Lentiviral Particles: sc-90892-V.

Molecular Weight of NDUFA1: 8 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) 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.

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.



Try **NDUFA1 (3B9-1A1): sc-517006**, our highly recommended monoclonal alternative to NDUFA1 (T-13).