

NDUFV1 (G-12): sc-109597

BACKGROUND

Complex 1 (also known as NADH dehydrogenase) of the electron transport chain (respiratory chain) is an enzymatic complex that catalyzes the transfer of electrons from NADH to ubiquinone. Free energy from the reaction is conserved in the transfer of protons into the inter-membrane space to create an electrochemical proton gradient, a driving force for ATP synthesis. Complex 1 is an extremely complicated, multi-protein, L-shaped complex composed of 45 different subunits located in the mitochondrial inner-membrane. NDUFV1 (NADH dehydrogenase ubiquinone flavoprotein 1), also known as UQOR1 or CI-51kD, is a 464 amino acid core subunit protein of complex 1 that is essential for the electron transport chain. The peripheral membrane protein, NDUFV1, contains a highly conserved NADH-binding site and is localized to the matrix side of the inner membrane. Defects in the gene encoding NDUFV1 can cause complex 1 deficiency in humans, which can lead to Leigh syndrome (LS), a severe neurological disorder characterized by lesions in the subcortical brain region.

CHROMOSOMAL LOCATION

Genetic locus: NDUFV1 (human) mapping to 11q13.2; Ndufv1 (mouse) mapping to 19 A.

SOURCE

NDUFV1 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NDUFV1 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.

Blocking peptide available for competition studies, sc-109597 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NDUFV1 (G-12) is recommended for detection of NDUFV1 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), immunohistochemistry (including paraffin-embedded sections) (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 family members NDUFV2 or NDUFV3.

NDUFV1 (G-12) is also recommended for detection of NDUFV1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NDUFV1 siRNA (h): sc-96604, NDUFV1 siRNA (m): sc-149891, NDUFV1 shRNA Plasmid (h): sc-96604-SH, NDUFV1 shRNA Plasmid (m): sc-149891-SH, NDUFV1 shRNA (h) Lentiviral Particles: sc-96604-V and NDUFV1 shRNA (m) Lentiviral Particles: sc-149891-V.

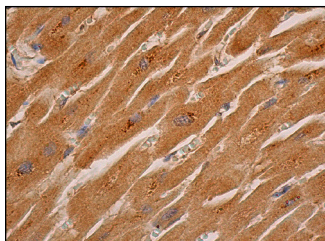
Molecular Weight of NDUFV1: 51 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NDUFV1 (G-12): sc-109597. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

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.



Try **NDUFV1 (14.8): sc-100566**, our highly recommended monoclonal alternative to NDUFV1 (G-12).