

mitoNEET (AT1A8): sc-517413

BACKGROUND

MitoNEET, also known as CISD1 (CDGSH iron sulfur domain 1) or ZCD1, is a 108 amino acid single-pass type II membrane protein that localizes to mitochondria and contains one CDGSH-type zinc finger. Expressed at high levels in heart, liver and skeletal muscle, mitoNEET exists as a homodimer that can bind iron as a cofactor and plays an essential role in the regulation of electron transport capacity and oxidative phosphorylation. Additionally, mitoNEET is thought to be associated with CFTR (cystic fibrosis transmembrane conductance regulator) and may play a role in the pathogenesis of cystic fibrosis. MitoNEET expression is down-regulated by glibenclamide (an anti-diabetic drug) and is up-regulated by isoproterenol (a synthetic catecholamine that stimulates both β 1-AR and β 2-AR), suggesting that mitoNEET is under tight regulation by electron transport-associated molecules.

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CHROMOSOMAL LOCATION

Genetic locus: CISD1 (human) mapping to 10q21.1; Cisd1 (mouse) mapping to 10 B5.3.

STORAGE

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

SOURCE

mitoNEET (AT1A8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 32-108 of mitoNEET of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 1% glycerol, and 0.1% gelatin.

APPLICATIONS

mitoNEET (AT1A8) is recommended for detection of mitoNEET of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for mitoNEET siRNA (h): sc-90615, mitoNEET siRNA (m): sc-149450, mitoNEET shRNA Plasmid (h): sc-90615-SH, mitoNEET shRNA Plasmid (m): sc-149450-SH, mitoNEET shRNA (h) Lentiviral Particles: sc-90615-V and mitoNEET shRNA (m) Lentiviral Particles: sc-149450-V.

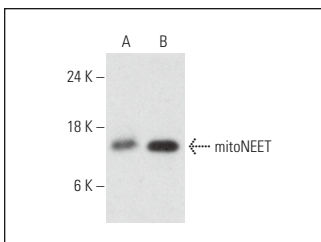
Molecular Weight of mitoNEET: 13 kDa.

Positive Controls: mouse kidney extract: sc-2255 or human kidney extract: sc-363764.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



mitoNEET (AT1A8): sc-517413. Western blot analysis of mitoNEET expression in human kidney (A) and mouse kidney (B) tissue extracts.

RESEARCH USE

For research use only, not for use in diagnostic procedures.