

FOXRED1 (K-12): sc-138282

BACKGROUND

FOXRED1 (FAD-dependent oxidoreductase domain-containing protein 1), also known as FP634, is a 486 amino acid single-pass membrane protein. Utilizing FAD as a cofactor, FOXRED1 may act as a chaperone protein essential for the function of mitochondrial complex I. Mutations to FOXRED1 may result in mitochondrial complex I deficiency (MT-C1D), which results in a wide range of clinical maladies from lethal neonatal disease to adult onset neurodegenerative disorders. Common phenotypes of MT-C1D include cardiomyopathy, liver disease, Leigh syndrome, Leber hereditary optic neuropathy, and some forms of Parkinson disease. FOXRED1 exists as three alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 11q24.2. With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FOXRED1 (human) mapping to 11q24.2; Foxred1 (mouse) mapping to 9 A4.

SOURCE

FOXRED1 (K-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of FOXRED1 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-138282 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FOXRED1 (K-12) is recommended for detection of FOXRED1 of mouse 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 FOXRED2.

Suitable for use as control antibody for FOXRED1 siRNA (h): sc-96988, FOXRED1 siRNA (m): sc-145230, FOXRED1 shRNA Plasmid (h): sc-96988-SH, FOXRED1 shRNA Plasmid (m): sc-145230-SH, FOXRED1 shRNA (h) Lentiviral Particles: sc-96988-V and FOXRED1 shRNA (m) Lentiviral Particles: sc-145230-V.

Molecular Weight of FOXRED1 isoform 1: 54 kDa.

Molecular Weight of FOXRED1 isoform 2: 31 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.