

Rieske FeS (A-5): sc-271609

BACKGROUND

Cytochrome c is a well characterized, mobile electron transport protein that is essential to energy conversion in all aerobic organisms. Cytochrome b associates with cytochrome c subunit 1 and the Rieske protein to form complex III (also designated cytochrome bc₁ complex), which is involved in cellular respiration. Ubiquinol cytochrome c reductase (UQCRC1), also referred to as Rieske iron-sulfur protein (Rieske FeS), represents an important subunit of complex III of the mitochondrial respiratory chain. This complex transfers electrons from ubiquinol to cytochrome c. The gene encoding for Rieske FeS may be involved in the development of a more aggressive phenotype of breast cancer.

CHROMOSOMAL LOCATION

Genetic locus: UQCRC1 (human) mapping to 19q12; Uqcrf1 (mouse) mapping to 13 A3.2.

SOURCE

Rieske FeS (A-5) is a mouse monoclonal antibody raised against amino acids 171-223 mapping within an internal region of Rieske FeS of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rieske FeS (A-5) is available conjugated to agarose (sc-271609 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271609 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271609 PE), fluorescein (sc-271609 FITC), Alexa Fluor[®] 488 (sc-271609 AF488), Alexa Fluor[®] 546 (sc-271609 AF546), Alexa Fluor[®] 594 (sc-271609 AF594) or Alexa Fluor[®] 647 (sc-271609 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271609 AF680) or Alexa Fluor[®] 790 (sc-271609 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rieske FeS (A-5) is recommended for detection of Rieske FeS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Rieske FeS siRNA (h): sc-72148, Rieske FeS siRNA (m): sc-72149, Rieske FeS shRNA Plasmid (h): sc-72148-SH, Rieske FeS shRNA Plasmid (m): sc-72149-SH, Rieske FeS shRNA (h) Lentiviral Particles: sc-72148-V and Rieske FeS shRNA (m) Lentiviral Particles: sc-72149-V.

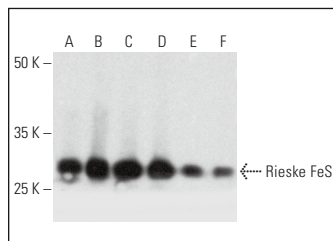
Molecular Weight of Rieske FeS: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Neuro-2A whole cell lysate: sc-364185 or NRK whole cell lysate: sc-364197.

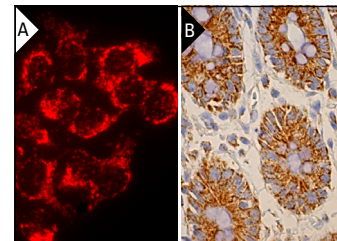
STORAGE

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

DATA



Rieske FeS (A-5): sc-271609. Western blot analysis of Rieske FeS expression in HeLa (A), Raji (B), Neuro-2A (C), Sol8 (D), NRK (E) and L8 (F) whole cell lysates.



Rieske FeS (A-5): sc-271609. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Lee, S., et al. 2015. High inorganic phosphate intake promotes tumorigenesis at early stages in a mouse model of lung cancer. *PLoS ONE* 10: e0135582.
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- Ledahawsky, L.M., et al. 2022. The mitochondrial protein Sideroflexin 3 (SFXN3) influences neurodegeneration pathways *in vivo*. *FEBS J.* 289: 3894-3914.
- Tsai, C.W., et al. 2022. Mechanisms and significance of tissue-specific MICU regulation of the mitochondrial calcium uniporter complex. *Mol. Cell* 82: 3661-3676.e8.
- Matassa, D.S., et al. 2022. Regulation of mitochondrial complex III activity and assembly by TRAP1 in cancer cells. *Cancer Cell Int.* 22: 402.
- Avolio, R., et al. 2023. Cytosolic and mitochondrial translation elongation are coordinated through the molecular chaperone TRAP1 for the synthesis and import of mitochondrial proteins. *Genome Res.* 33: 1242-1257.
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RESEARCH USE

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