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UQCRFS1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11659b

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	P47985
Other Accession	Q9CR68, Q5ZLR5, P0C7P4, NP_005994.2
Reactivity	Human
Predicted	Chicken, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31753
Calculated MW	29668
Antigen Region	181-209

Additional Information

Gene ID	7386
Other Names	Cytochrome b-c1 complex subunit Rieske, mitochondrial, Complex III subunit 5, Cytochrome b-c1 complex subunit 5, Rieske iron-sulfur protein, RISP, Ubiquinol-cytochrome c reductase iron-sulfur subunit, Cytochrome b-c1 complex subunit 11, Complex III subunit IX, Ubiquinol-cytochrome c reductase 8 kDa protein, UQCRFS1
Target/Specificity	This UQCRFS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 181-209 amino acids from the C-terminal region of human UQCRFS1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	UQCRFS1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UQCRFS1 (HGNC:12587)
Function	[Cytochrome b-c1 complex subunit Rieske, mitochondrial]: Component of the ubiquinol-cytochrome c oxidoreductase, a multisubunit transmembrane complex that is part of the mitochondrial electron transport chain which drives oxidative phosphorylation (PubMed:31883641). The respiratory chain contains 3 multisubunit complexes succinate dehydrogenase (complex II, CII), ubiquinol- cytochrome c oxidoreductase (cytochrome b-c1 complex, complex III, CIII) and cytochrome c oxidase (complex IV, CIV), that cooperate to transfer electrons derived from NADH and succinate to molecular oxygen, creating an electrochemical gradient over the inner membrane that drives transmembrane transport and the ATP synthase. The cytochrome b- c1 complex catalyzes electron transfer from ubiquinol to cytochrome c, linking this redox reaction to translocation of protons across the mitochondrial inner membrane, with protons being carried across the membrane as hydrogens on the quinol. In the process called Q cycle, 2 protons are consumed from the matrix, 4 protons are released into the intermembrane space and 2 electrons are passed to cytochrome c. The Rieske protein is a catalytic core subunit containing a [2Fe-2S] iron- sulfur cluster. It cycles between 2 conformational states during catalysis to transfer electrons from the quinol bound in the Q(0) site in cytochrome b to cytochrome c1 (By similarity). Incorporation of UQCRFS1 is the penultimate step in complex III assembly (PubMed:28673544).
Cellular Location	Mitochondrion inner membrane; Single-pass membrane protein {ECO:0000250|UniProtKB:Q5ZLR5}

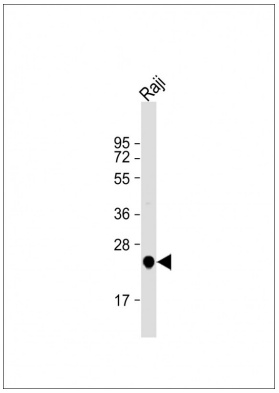
Background

Component of the ubiquinol-cytochrome c reductase complex (complex III or cytochrome b-c1 complex), which is a respiratory chain that generates an electrochemical potential coupled to ATP synthesis. The transit peptide of the Rieske protein seems to form part of the bc1 complex and is considered to be the subunit 11/IX of that complex (By similarity).

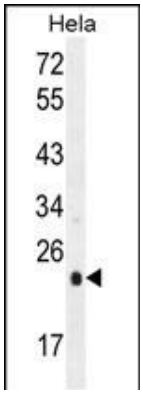
References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Wang, L., et al. Cancer Epidemiol. Biomarkers Prev. 17(12):3558-3566(2008)
Lamesch, P., et al. Genomics 89(3):307-315(2007)
Grimwood, J., et al. Nature 428(6982):529-535(2004)
Ohashi, Y., et al. Gynecol. Oncol. 93(1):54-58(2004)

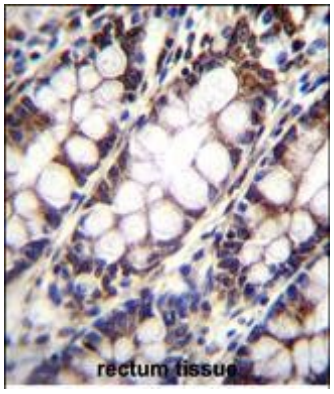
Images



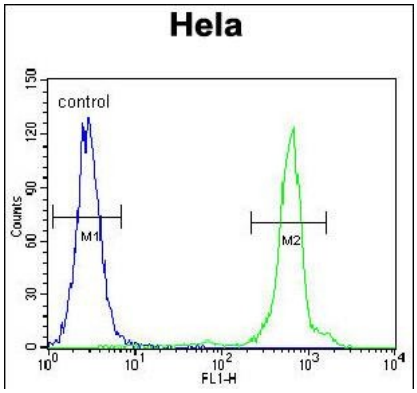
Anti-UQCRFS1 Antibody (C-term) at 1:1000 dilution + Raji whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 30 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



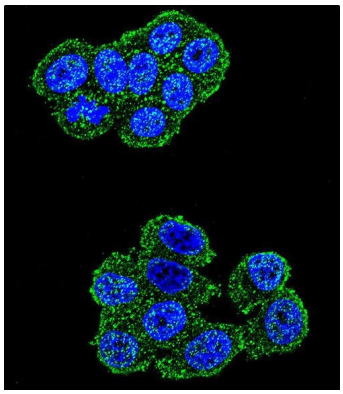
UQCRFS1 Antibody (C-term) (Cat. #AP11659b) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the UQCRFS1 antibody detected the UQCRFS1 protein (arrow).



UQCRFS1 Antibody (C-term) (Cat. #AP11659b)immunohistochemistry analysis in formalin fixed and paraffin embedded human rectum tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of UQCRFS1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



UQCRFS1 Antibody (C-term) (Cat. #AP11659b) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Confocal immunofluorescent analysis of UQCRFS1 Antibody (C-term)(Cat#AP11659b) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).