SDHA Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	SDHA, Polyclonal Antibody
Full Product Name	SDHA Conjugated Antibody
Product Gene Name	anti-SDHA antibody
Product Synonym Names	FP; PGL5; SDH1; SDH2; SDHF; CMD1GG
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	The antibody detects endogenous levels of total SDHA protein.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	56,650 Da
OMIM	phenotype 614165
3D Structure	ModBase 3D Structure for P31040
Immunogen	Fusion protein of human SDHA
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-SDHA antibody	Most Applications
Application Notes for anti-SDHA antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-SDHA antibody	This gene encodes a major catalytic subunit of succinate-ubiquinone oxidoreductase, a complex of the mitochondrial respiratory chain. The complex is composed of four nuclear-encoded subunits and is localized in the mitochondrial inner membrane. Mutations in this gene have been associated with a form of mitochondrial respiratory chain deficiency known as Leigh Syndrome. A pseudogene has been identified on chromosome 3q29.
Other Notes	Small volumes of anti-SDHA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for SDHA purchase	MBS9451113 is an antibody targeting SDHA. Also known as SDHA Conjugated Antibody. Reactive in Human, Mouse. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SDHA. It may not necessarily be applicable to this product.

NCBI GI #	34783903
NCBI GeneID	6389
NCBI Accession #	BC001380
UniProt Primary Accession #	P31040
UniProt Secondary Accession #	Q16395; Q59GW8; Q8IW48; Q9UMY5; A8K5J6; B4DJ60; E9PBJ5
UniProt Related Accession #	P31040
NCBI Official Full Name	Homo sapiens succinate dehydrogenase complex, subunit A, flavoprotein (Fp), mRNA
NCBI Official Synonym Full Names	succinate dehydrogenase complex flavoprotein subunit A
NCBI Official Symbol	SDHA
NCBI Official Synonym Symbols	FP; PGL5; SDH1; SDH2; SDHF; CMD1GG
UniProt Protein Name	Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial
UniProt Synonym Protein Names	Flavoprotein subunit of complex II; Fp
Protein Family	8-methylmenaquinol:fumarate reductase flavoprotein
UniProt Gene Name	SDHA
UniProt Synonym Gene Names	SDH2; SDHF; Fp
UniProt Entry Name	SDHA_HUMAN
NCBI Protein Information	succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial
NCBI Summary for SDHA	This gene encodes a major catalytic subunit of succinate-ubiquinone oxidoreductase, a complex of the mitochondrial respiratory chain. The complex is composed of four nuclear-encoded subunits and is localized in the mitochondrial inner membrane. Mutations in this gene have been associated with a form of mitochondrial respiratory chain deficiency known as Leigh Syndrome. A pseudogene has been identified on chromosome 3q29. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2014]

UniProt Comments for SDHA	SDHA: is the catalytic subunit of succinate dehydrogenase (SDH) complex II of the mitochondrial electron transport chain. Complex II contains four subunits: the flavoprotein catalytic subunit SDHA, iron-sulfur protein SDHB, and a cytochrome b560 composed of SDHC and SDHD. Interaction with SDH5 is required for FAD attachment. Responsible for transferring electrons from succinate to ubiquinone (coenzyme Q). Defects in SDHA cause defective mitochondrial oxidative phosphorylation, giving rise to heterogeneous clinical symptoms ranging from isolated organ dysfunction to multisystem disorder. Acetylation of SDHA may control entry of the substrate into the active site, thus regulating its enzymatic activity. Acetylated SDHA may be a SIRT3 substrate SIRT3 is a mitochondrial NAD(+)-dependent deacetylase. Increased succinate levels as a consequence of SDH deficiency inhibit hypoxia inducible factor-1alpha (HIF-1alpha) prolyl hydroxylases leading to sustained HIF-1alpha expression in tumours. Defects in SDHA cause of Leigh syndrome, a severe disorder characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions. Protein type: Mitochondrial; Carbohydrate Metabolism - citrate (TCA) cycle; EC 1.3.5.1; Oxidoreductase; Tumor suppressor; Energy Metabolism - oxidative phosphorylation Chromosomal Location of Human Ortholog: 5p15 Cellular Component: mitochondrial respiratory chain complex II; mitochondrion; mitochondrial inner membrane Molecular Function: protein binding; succinate dehydrogenase (ubiquinone) activity; FAD binding; succinate dehydrogenase activity Biological Process: succinate metabolic process; cellular metabolic process; nervous system development; tricarboxylic acid cycle Disease: Mitochondrial Complex Ii Deficiency; Leigh Syndrome; Paragangliomas 5; Cardiomyopathy, Dilated, 1gg
Research Articles on SDHA	**1.** our findings provide further evidence that patients with KIT/PDGFRA wild-type SDH-deficient GIST harboring SDHA mutations experience good survival outcomes
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