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SLC25A6 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12188C

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P12236
Other Accession	NP_001627.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32242
Calculated MW	32866
Antigen Region	128-155

Additional Information

Gene ID	293
Other Names	ADP/ATP translocase 3, ADP, ATP carrier protein 3, ADP, ATP carrier protein, isoform T2, ANT 2, Adenine nucleotide translocator 3, ANT 3, Solute carrier family 25 member 6, ADP/ATP translocase 3, N-terminally processed, SLC25A6, ANT3
Target/Specificity	This SLC25A6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 128-155 amino acids from the Central region of human SLC25A6.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	SLC25A6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC25A6 (HGNC:10992)

Function	ADP:ATP antiporter that mediates import of ADP into the mitochondrial matrix for ATP synthesis, and export of ATP out to fuel the cell (By similarity). Cycles between the cytoplasmic-open state (c- state) and the matrix-open state (m-state): operates by the alternating access mechanism with a single substrate-binding site intermittently exposed to either the cytosolic (c-state) or matrix (m-state) side of the inner mitochondrial membrane (By similarity). In addition to its ADP:ATP antiporter activity, also involved in mitochondrial uncoupling and mitochondrial permeability transition pore (mPTP) activity (PubMed:15033708). Plays a role in mitochondrial uncoupling by acting as a proton transporter: proton transport uncouples the proton flows via the electron transport chain and ATP synthase to reduce the efficiency of ATP production and cause mitochondrial thermogenesis (By similarity). Proton transporter activity is inhibited by ADP:ATP antiporter activity, suggesting that SLC25A6/ANT3 acts as a master regulator of mitochondrial energy output by maintaining a delicate balance between ATP production (ADP:ATP antiporter activity) and thermogenesis (proton transporter activity) (By similarity). Proton transporter activity requires free fatty acids as cofactor, but does not transport it (By similarity). Also plays a key role in mPTP opening, a non-specific pore that enables free passage of the mitochondrial membranes to solutes of up to 1.5 kDa, and which contributes to cell death (PubMed:15033708). It is however unclear if SLC25A6/ANT3 constitutes a pore-forming component of mPTP or regulates it (By similarity).
Cellular Location	Mitochondrion inner membrane {ECO:0000250|UniProtKB:P02722}; Multi-pass membrane protein. Membrane; Multi-pass membrane protein. Note=The complex formed with ARL2BP, ARL2 and SLC25A6/ANT3 is expressed in mitochondria (By similarity). May localize to non-mitochondrial membranes (By similarity) {ECO:0000250|UniProtKB:P12235}
Tissue Location	Expressed in erythrocytes (at protein level).

Background

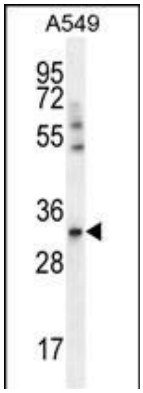
This gene is a member of the mitochondrial carrier subfamily of solute carrier protein genes. The product of this gene functions as a gated pore that translocates ADP from the mitochondrial matrix into the cytoplasm. The protein is implicated in the function of the permability transition pore complex (PTPC), which regulates the release of mitochondrial products that induce apoptosis. The human genome contains several non-transcribed pseudogenes of this gene.

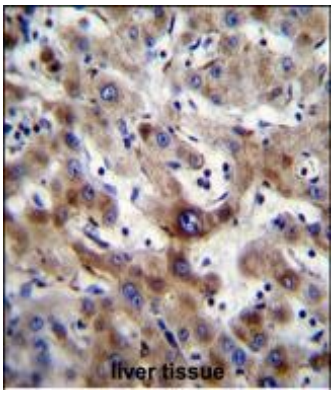
References

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Hu, Z., et al. FEBS Lett. 583(2):383-388(2009)
Yang, Z., et al. Mol. Biol. Cell 18(11):4681-4689(2007)
Tu, L.C., et al. Mol. Cell Proteomics 6(4):575-588(2007)
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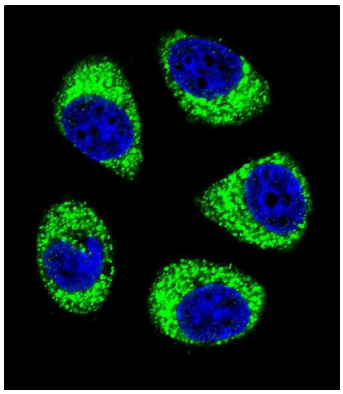
Images

SLC25A6 Antibody (Center) (Cat. #AP12188c) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the SLC25A6 antibody detected the SLC25A6 protein (arrow).

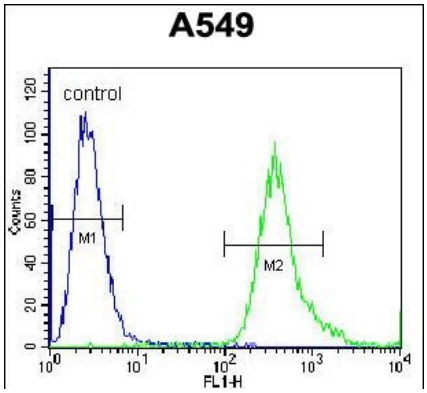




SLC25A6 Antibody (Center) (Cat. #AP12188c)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of SLC25A6 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of SLC25A6 Antibody (Center)(Cat#AP12188c) with A549 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).



SLC25A6 Antibody (Center) (Cat. #AP12188c) flow cytometric analysis of A549 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Mortalin/HSPA9 targeting selectively induces KRAS tumor cell death by perturbing mitochondrial membrane permeability
- Mortalin depletion induces MEK/ERK-dependent and ANT/CypD-mediated death in vemurafenib-resistant B-Raf melanoma cells

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