10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-COX5A Antibody

Catalog # AP51691

Product Information

Application	WB, IHC
Primary Accession	P20674
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	16762

Additional Information

Gene ID	9377
Other Names	Cytochrome c oxidase subunit 5A mitochondrial; Cytochrome c oxidase polypeptide Va
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human COX5A. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	COX5A
Function	Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. 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. Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Electrons originating from reduced cytochrome c in the intermembrane space (IMS) are transferred via the dinuclear copper A center (CU(A)) of subunit 2 and heme A of subunit 1 to the active site in subunit 1, a binuclear center (BNC) formed by heme A3 and copper B (CU(B)). The BNC reduces molecular oxygen to 2 water molecules using 4 electrons from cytochrome c in the IMS and 4 protons from

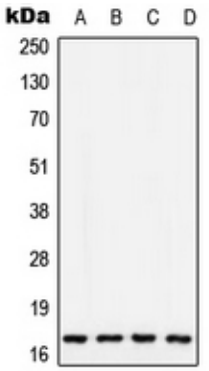
the mitochondrial matrix.

Cellular Location Mitochondrion inner membrane; Peripheral membrane protein; Matrix side

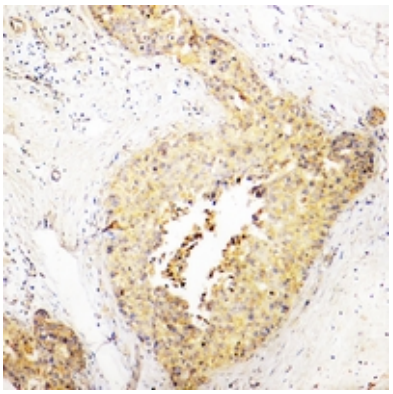
References

Rizzuto R.,et al.Gene 69:245-256(1988).
Uddin M.,et al.BMC Evol. Biol. 8:8-8(2008).
Ebert L.,et al.Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases.
Zody M.C.,et al.Nature 440:671-675(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

Images



Western blot analysis of COX5A expression in MCF7 (A), SP2/0 (B), PC12 (C), Human liver (D) whole cell lysates. (Predicted band size: 16 kD; Observed band size: 17 kD)



Immunohistochemical analysis of COX5A staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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