abcam

ab270249

Anti-Cytochrome C antibody [6H2.B4]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Full Length Protein corresponding to Rat Cycs. The exact immunogen used to generate this antibody is proprietary information. Database link P62898
Clone number	6H2.B4
Purification technique	Affinity purification Protein A/G
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from Bioreactor Concentrate.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CYCS

Function	Electron carrier protein. The oxidized form of the cytochrome c heme group can accept an electron from the heme group of the cytochrome c1 subunit of cytochrome reductase. Cytochrome c then transfers this electron to the cytochrome oxidase complex, the final protein carrier in the mitochondrial electron-transport chain. Plays a role in apoptosis. Suppression of the anti-apoptotic members or activation of the pro-apoptotic members of the Bcl-2 family leads to altered mitochondrial membrane permeability resulting in release of cytochrome c into the cytosol. Binding of cytochrome c to Apaf-1 triggers the activation of caspase-9, which then accelerates apoptosis by activating other caspases.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cytochrome C also referred to as "cytochrome c" or "Cyt C" is a small protein with a molecular weight of approximately 12 kDa. It is a component of the electron transport chain playing an essential mechanical role in cellular respiration. Cytochrome C is expressed in the mitochondria of eukaryotic cells where it functions as a heme protein. The mass of this protein allows efficient electron transfer between Complex III (cytochrome bc1 complex) and Complex IV (cytochrome c oxidase) contributing to ATP synthesis.
Biological function summary	Cytochrome c contributes to the process of oxidative phosphorylation within mitochondria. It is not only an important electron carrier but it also plays a significant role in apoptosis. In the event of cellular stress cytochrome c releases into the cytosol and forms part of the apoptosome complex. This apoptosome activation leads to the caspase cascade driving programmed cell death. Therefore cytochrome C serves as both a mediator of energy production and a regulator of apoptosis.
Pathways	Cytochrome c is integral to the mitochondrial electron transport chain and apoptotic pathways. It interacts with proteins in these pathways such as cytochrome c oxidase in oxidative phosphorylation and Apaf-1 during apoptosis. The electron transport chain's function is dependent on the efficient transfer of electrons facilitated by cytochrome c ensuring ATP production in cellular respiration.
Associated diseases and disorders	Cytochrome c links to conditions like cancer and neurodegenerative diseases. In cancer its role in the apoptotic pathway often emerges as cancer cells can develop mechanisms to evade apoptosis impacting cytochrome c release. For neurodegenerative diseases disruptions in mitochondrial function and cytochrome c's release can facilitate cell death implicating its role in conditions like Parkinson's disease. The interaction of cytochrome c with proteins such as p53 in response to cellular stress further highlights its involvement in disease pathogenesis.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

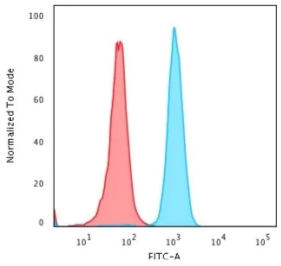
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

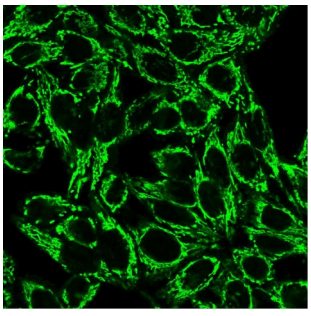
2 product images



Flow Cytometry - Anti-Cytochrome C antibody [6H2.B4] (ab270249)

Cytochrome C Flow Cytometry staining using mouse Anti-Cytochrome C antibody

Flow cytometric analysis of PFA-fixed HeLa cells labeling cytochrome C using ab270249 at 2µg/10^6 cells followed by goat anti-mouse IgG-CF488 (Blue); goat anti-mouse IgG-CF488 is control (Red).



Immunocytochemistry/ Immunofluorescence - Anti-Cytochrome C antibody [6H2.B4] (ab270249)

Cytochrome C Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Cytochrome C antibody

Immunofluorescence analysis of HeLa cells labeling Cytochrome C (Green) using ab270249 at 2µg/ml, followed by goat anti-mouse IgG-CF488 (Green).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.