abcam

Product datasheet

Anti-Cytochrome C antibody [7H8.2C12] ab13575

26 Abreviews 84 References 6 Images

Overview

Product name	Anti-Cytochrome C antibody [7H8.2C12]
Description	Mouse monoclonal [7H8.2C12] to Cytochrome C
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, IHC-Fr, ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Horse, Pigeon, Human, Drosophila melanogaster
Immunogen	Synthetic peptides corresponding to amino acids 1-80, 81-104 and 66-104 of pigeon CYT.
Epitope	The antibody recognizes an epitope within amino acids 93-104 of pigeon Cytochrome C, based on competitive ELISA results.
Positive control	This antibody gave a positive signal in the following lysates: HeLa whole cell; Jurkat whole cell; Human heart tissue. In Flow Cytometry, this antibody gave a positive signal in methanol fixed/Tween permeabilised HepG2 cells.
General notes	This antibody clone is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	IgG fraction
Clonality	Monoclonal
Clone number	7H8.2C12
Isotype	IgG2b
Light chain type	kappa

Applications

Applications

Our Abpromise guarantee covers the use of **ab13575** in the following tested applications.

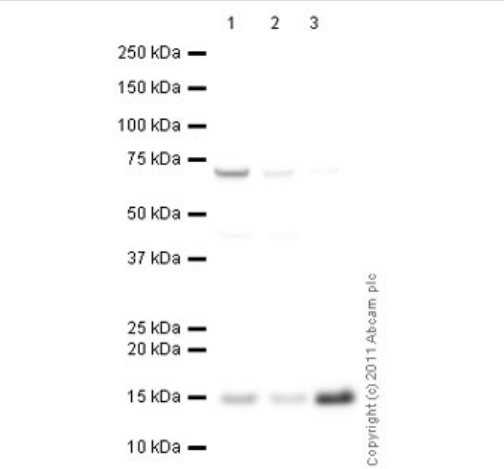
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use 0.1-1µg for 10^6 cells. ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
IHC-Fr	★★★★☆	Use at an assay dependent concentration.
ICC/IF	★★★★☆	1/200 - 1/500. (see Abreviews)
WB	★★★★☆	Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 15 kDa (predicted molecular weight: 12 kDa).
IHC-P	★★★★★	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

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.
Involvement in disease	Defects in CYCS are the cause of thrombocytopenia type 4 (THC4) [MIM:612004]; also known as autosomal dominant thrombocytopenia type 4. Thrombocytopenia is the presence of relatively few platelets in blood. THC4 is a non-syndromic form of thrombocytopenia. Clinical manifestations of thrombocytopenia are absent or mild. THC4 may be caused by dysregulated platelet formation.
Sequence similarities	Belongs to the cytochrome c family.
Post-translational modifications	Binds 1 heme group per subunit.
Cellular localization	Mitochondrion matrix.

Images



Western blot - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)

All lanes : Anti-Cytochrome C antibody [7H8.2C12] (ab13575) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
Lane 3 : Human heart tissue lysate - total protein (ab29431)

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

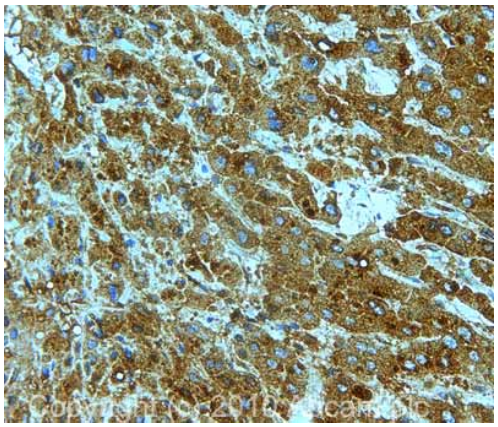
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 12 kDa
Additional bands at: 70 kDa. We are unsure as to the identity of these extra bands.

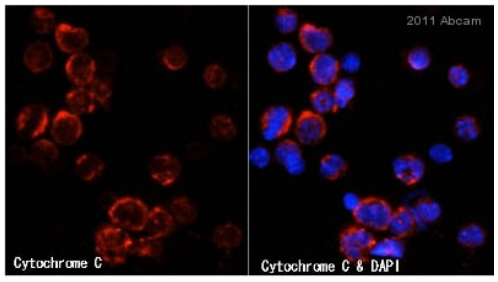
Exposure time: 3 minutes

Abcam recommends using milk (5%) as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)

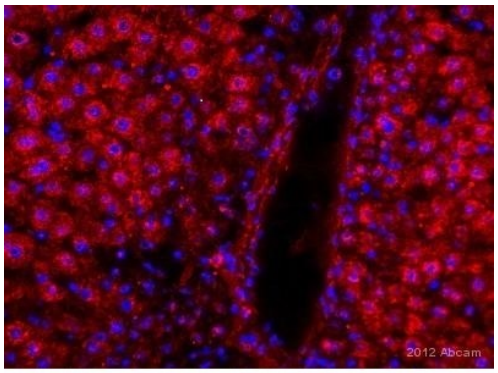
IHC image of Cytochrome C staining in human normal liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab13575, 1µg/ml, for 15 mins 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.



Immunocytochemistry/ Immunofluorescence - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)

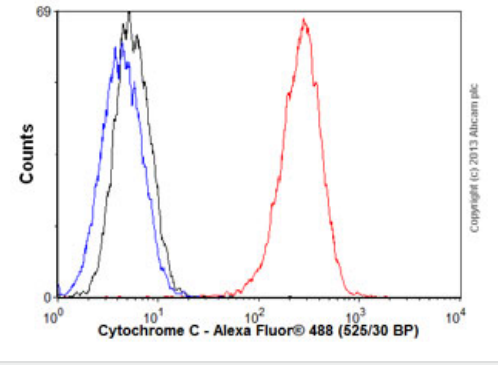
Image courtesy of an anonymous Abreview.

ab13575 staining Cytochrome C in leukocytes from murine bone marrow by Immunocytochemistry/ Immunofluorescence. The cells were fixed in methanol and then blocked using 5% serum for 2 hours at 25°C. Samples were then incubated with primary antibody at 1/250 for 16 hours at 5°C. The secondary antibody used was a goat anti-mouse IgG conjugated to Alexa Fluor® 594 (red) used at a 1/500 dilution. Counterstained with DAPI (blue).



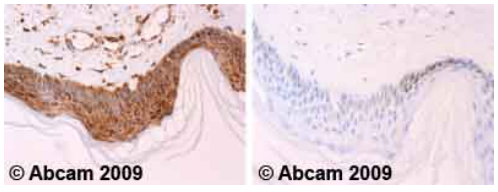
Immunohistochemistry (Frozen sections) - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)
This image is courtesy of an anonymous Abreview

ab13575 staining Cytochrome C from Rat liver by Immunohistochemistry (IHC-Fr-frozen sections).Tissue was fixed with acetone,Samples were incubated with primary antibody (1/300 in PBS 0.1% Triton X) for 15 hours at 4°C.Alexa Fluor® 555 Goat anti-mouse IgG polyclonal (1/1000) was used as the secondary antibody.



Flow Cytometry - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)

Overlay histogram showing HepG2 cells stained with ab13575 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab13575, 0.1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1]/mouse IgG2b [PLPV219] (ab91353/ab91366, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytochrome C antibody [7H8.2C12] (ab13575)

Ab13575 staining human normal skin tissue. Staining is localised to mitochondria.
Left panel: with primary antibody at 4 ug/ml. Right panel: isotype control.
Sections were stained using an automated system DAKO Autostainer Plus , at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 antigen retrieval buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and

	incubation time (overnight incubation), and amplification may be required.

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