Anti-Cytochrome C Antibody [10-E11-G2]

M1701-9

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 12 kDa
Clone number:	10-E11-G2

Description: Cytochrome c is a well characterized mobile electron transport protein that is essential to energy conversion in all aerobic organisms. In mammalian cells, this highly conserved protein is normally localized to the mitochondrial intermembrane space. More recent studies have identifed cytosolic cytochrome c as a factor necessary for activation of apoptosis. During apoptosis, cytochrome c is translocated from the mitochondrial membrane to the cytosol, where it is required for activation of caspase-3 (CPP32). Overexpression of Bcl-2 has been shown to prevent the translocation of cytochrome c, thereby blocking the apoptotic process. Overexpression of Bax has been shown to induce the release of cytochrome c and to induce cell death. The release of cytochrome c from the mitochondria is thought to trigger an apoptotic cascade, whereby Apaf-1 binds to Apaf-3 (caspase-9) in a cytochrome c-dependent manner, leading to caspase-9 cleavage of caspase-3.

Immunogen: Synthetic peptide within human Cytochrome C aa 2-60.

Positive control: Mouse brain tissue lysate, Mouse kidney tissue lysate, Rat kidney tissue lysate, Hela, HepG2, MCF-7, human liver tissue, human spleen tissue, human kidney tissue, mouse heart tissue.

Subcellular location: Mitochondrion.

Database links: SwissProt: P99999 Human | P62897 Mouse | P62898 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:50-1:200
IHC-P	1:50-1:600

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

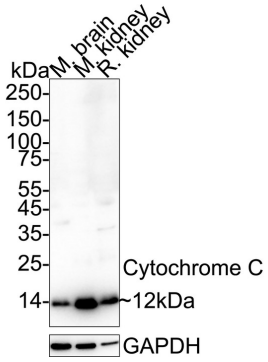

Fig1: Western blot analysis of Cytochrome C on different lysates with Mouse anti-Cytochrome C antibody (M1701-9) at 1/1,000 dilution.

Lane 1: Mouse brain tissue lysate
Lane 2: Mouse kidney tissue lysate
Lane 3: Rat kidney tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 12 kDa
Observed band size: 12 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1701-9) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

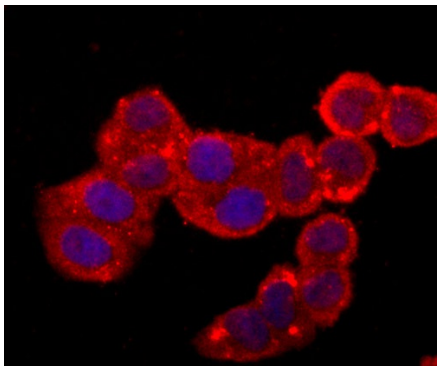

Fig2: ICC staining Cytochrome C (red) in Hela cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

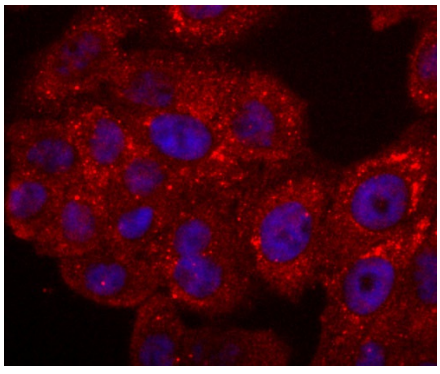

Fig3: ICC staining Cytochrome C (red) in HepG2 cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

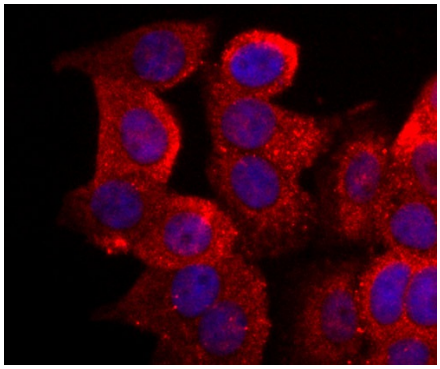

Fig4: ICC staining Cytochrome C (red) in MCF-7 cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

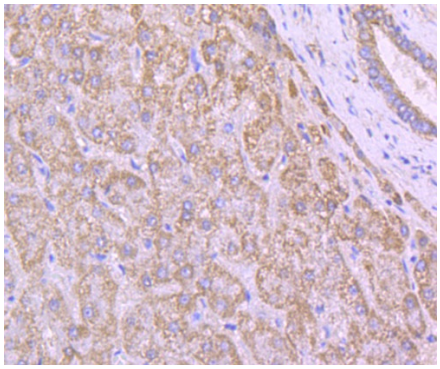

Fig5: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-Cytochrome C antibody. Counter stained with hematoxylin.

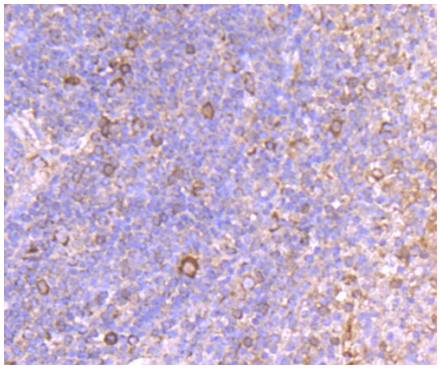

Fig6: Immunohistochemical analysis of paraffin-embedded human spleen tissue using anti-Cytochrome C antibody. Counter stained with hematoxylin.

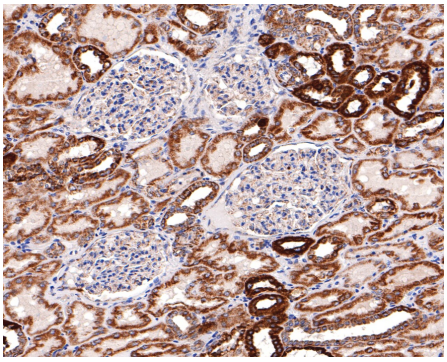

Fig7: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue with Mouse anti-Cytochrome C antibody (M1701-9) at 1/600 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (M1701-9) at 1/600 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

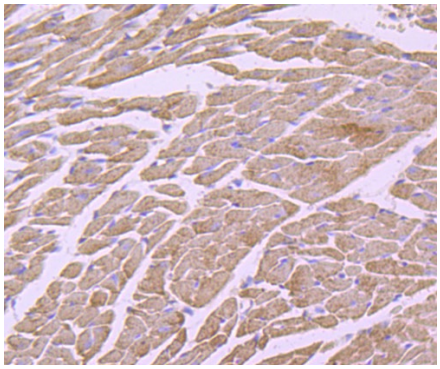

Fig8: Immunohistochemical analysis of paraffin-embedded mouse heart tissue using anti-Cytochrome C antibody. Counter stained with hematoxylin.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Liu T et al. Molecular and Cellular Mechanisms of Apoptosis during Dissociated Spermatogenesis. Front Physiol 8:188 (2017).
2. Huang J et al. Inhibition of SKP2 Sensitizes Bromocriptine-Induced Apoptosis in Human Prolactinoma Cells. Cancer Res Treat 49:358-373 (2017).