

## DESCRIPTION

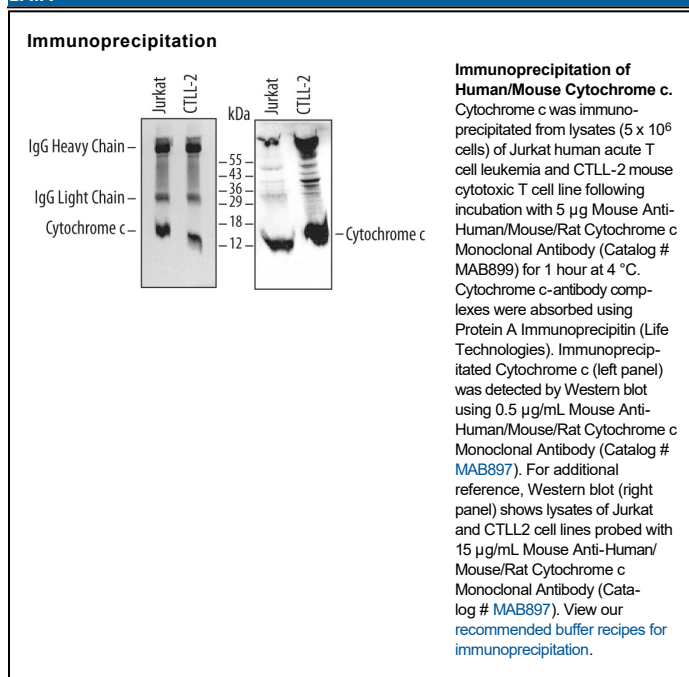
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects native human, mouse, and rat Cytochrome c.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 2.7D5
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Pigeon Cytochrome c
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunoprecipitation</b>	1 µg/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Cytochrome c is a critical mitochondrial outer membrane-associated protein in the electron transport chain (1). Reduction and oxidation of an iron molecule (Fe<sup>3+</sup> to Fe<sup>2+</sup> and back) within its central heme group allow it to receive an electron from the cytochrome c1 subunit of cytochrome reductase and pass it to cytochrome a within the cytochrome oxidase complex (1). Release of cytochrome c from mitochondria occurs during initiation of apoptotic pathways, either by mechanisms that rupture or that do not rupture the mitochondrial membrane (2, 3). Once in the cytosol, cytochrome c forms a complex with procaspase 9, recruiting Apaf-1 (apoptotic protease activating factor-1) and dATP to form apoptosomes, which activate caspase and ultimately destroy the cell (2, 3). Cytochrome c is highly conserved, with 90% or greater amino acid identity among human, mouse, rat, cow and dog sequences (4). After cytochrome c translation, the initial methionine is cleaved to form the 104 amino acid mature form.

## References:

1. Zubay, G. L., 1983, "Biochemistry", pp. 380, Addison-Wesley Pub. Co, Inc.
2. Liu, X. *et al.*, 1996, *Cell* **86**:147.
3. Li, P. *et al.*, 1997, *Cell* **91**:479.
4. Matsubara, H and E. L. Smith, 1963, *J. Biol. Chem.* **238**:2732.