Human OPA1 Antibody

Monoclonal Rabbit IgG Clone # 1284B
Catalog Number: MAB9506

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human, mouse, and rat OPA1 in Western blots.
Source	Monoclonal Rabbit IgG Clone # 1284B
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human OPA1 synthetic peptide Accession # O60313
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

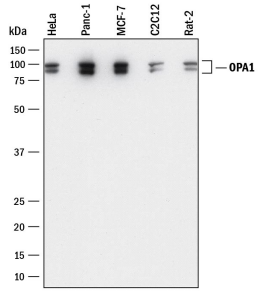
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below

DATA

Western Blot



Detection of Human, Mouse, and Rat OPA1 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, PANC-1 human pancreatic carcinoma cell line, MCF-7 human breast cancer cell line, C2C12 mouse myoblast cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 0.2 µg/mL of Rabbit Anti-Human OPA1 Monoclonal Antibody (Catalog # MAB9506) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). Specific bands were detected for OPA1 at approximately 80-100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Optic Atrophy-1 (OPA1), aka Dynamin-like 120 kDa protein, mitochondrial, is a Dynamin-related GTPase required for mitochondrial fusion and regulation of apoptosis. OPA1 exists as a single-pass membrane protein in the mitochondrion inner membrane as well as in soluble forms in mitochondrion intermembrane space, and is expressed in retina, brain, testis, heart, skeletal muscles. Human OPA1 binds PARL and interacts with CHCHD3 as well as IMMT (preferentially with soluble OPA1 forms). Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into mitochondrial intermembrane space. OPA1 protein form S1 is an inactive form produced by cleavage at S1 position by metalloendopeptidase OMA1 following stress conditions that induce loss of mitochondrial membrane potential, leading to negative regulation of mitochondrial fusion. Defects in OPA1 have been linked to optic atrophy type 1 (OPA1) and dominant optic atrophy plus syndrome (DOA+).

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