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OMI Antibody

Catalog # ASC10245

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O43464
Other Accession	AAB94569, 5870865
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	48841
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	OMI antibody can be used for detection of OMI by Western blot at 0.5 to 1 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	27429
Other Names	OMI Antibody: OMI, PARK13, PRSS25, OMI, Serine protease HTRA2, mitochondrial, High temperature requirement protein A2, HtrA2, HtrA serine peptidase 2
Target/Specificity	HTRA2;
Reconstitution & Storage	OMI antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	OMI Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HTRA2
Synonyms	OMI, PRSS25
Function	[Isoform 1]: Serine protease that shows proteolytic activity against a non-specific substrate beta-casein (PubMed:10873535). Promotes apoptosis by either relieving the inhibition of BIRC proteins on caspases, leading to an increase in caspase activity; or by a BIRC inhibition-independent, caspase-independent and serine protease activity-dependent mechanism (PubMed:15200957). Cleaves BIRC6 and relieves its inhibition on CASP3,

	CASP7 and CASP9, but it is also prone to inhibition by BIRC6 (PubMed:36758104, PubMed:36758105). Cleaves THAP5 and promotes its degradation during apoptosis (PubMed:19502560).
Cellular Location	Mitochondrion intermembrane space. Mitochondrion membrane; Single-pass membrane protein Note=Predominantly present in the intermembrane space. Released into the cytosol following apoptotic stimuli, such as UV treatment, and stimulation of mitochondria with caspase-8 truncated BID/tBID
Tissue Location	[Isoform 1]: Ubiquitously expressed.

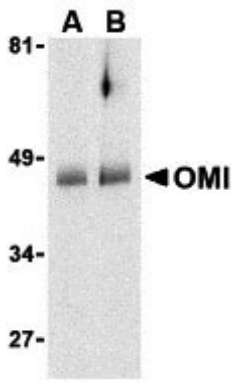
Background

OMI Antibody: Inhibitor of apoptosis proteins (IAPs) were initially identified in baculoviruses as proteins that inhibit apoptosis of the host cells to allow time for viral replication. Cellular homologues containing at least one baculoviral IAP repeat (BIR) motif essential for their anti-apoptosis activity have been identified in yeasts and higher organisms and often act by binding and inhibiting processed caspases. The activity of these proteins can be modulated by the expression of proteins such as Smac/DIABLO and XAF-1 which displace or prevent the binding of caspases by IAPs. Recently, a mitochondrial serine protease termed Omi/HtrA2 has been found to bind IAPs. Similar to Smac, Omi possesses a conserved IAP-binding motif, but acts to cleave IAPs to irreversibly inactivate IAPs and promote apoptosis.

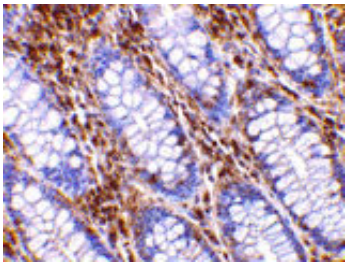
References

Crook NE, Clem RJ, and Miller LK. An apoptosis inhibiting baculovirus gene with a zinc finger like motif. J. Virol. 1993; 67:2168-2174.
Liston P, Fong WG, and Korneluk RG. The inhibitors of apoptosis: there is more to life than Bcl2. Oncogene 2003; 22:8568-80.
Vaux DL and Silke J. Mammalian mitochondrial IAP binding proteins. Biochem. Biophys. Res. Comm. 2003; 304:499-504.
Suzuki Y, Imai Y, Nakayama H, et al. A serine protease, HtrA2, is released from the mitochondria and interacts with XIAP, inducing cell death. Mol. Cell 2001; 8:613-21.

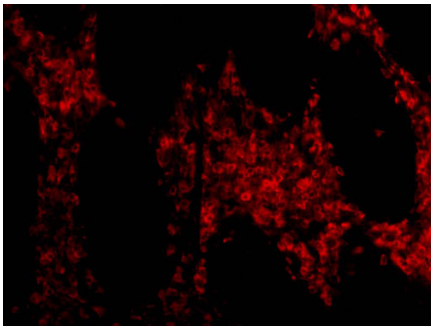
Images



Western blot analysis of OMI in human colon cell lysates with OMI antibody at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of OMI in human colon tissue with OMI antibody at 10 µg/mL.



Immunofluorescence of OMI in human colon tissue with OMI antibody at 20 µg/mL.