

DESCRIPTION

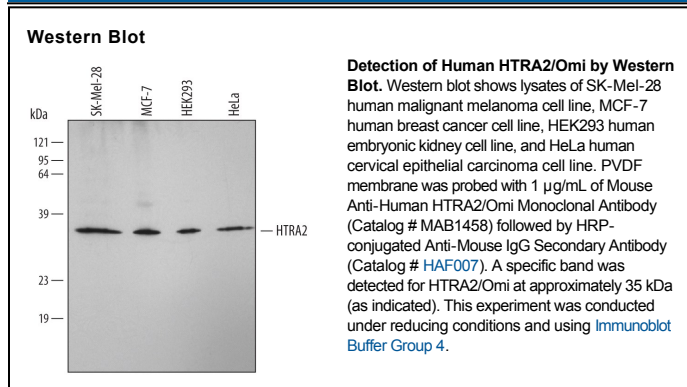
Species Reactivity	Human
Specificity	Detects the mitochondria-processed form of human HTRA2/Omi.
Source	Monoclonal Mouse IgG _{2B} Clone # 229926
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human HTRA2/Omi Ala134-Glu458 Accession # O43464
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	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	Immersion fixed non-apoptotic Jurkat human acute T cell leukemia cell line and Staurosporine treated apoptotic Jurkat human acute T cell leukemia cell line

DATA



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. <ul style="list-style-type: none"> ● 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

HTRA2/Omi is the mammalian homologue of bacterial high temperature requirement protein (HtrA). HTRA2/Omi localizes to the mitochondria and is processed to expose an amino-terminal Reaper-like motif similar to SMAC/Diablo. HTRA2/Omi is released from the mitochondria in response to apoptotic insult and can interact with the BIR2 or BIR3 domains of XIAP to relieve caspase-IAP inhibition. This effect can be measured by reversing XIAP-BIR2 (R&D Systems, Catalog # 786-XB) inhibition of Caspase-7 (R&D Systems, Catalog # 823-C7) cleavage of a fluorogenic peptide (DEVD-AFC, MP Bio, Catalog # AFC-138). IC₅₀ values for this effect are typically between 0.2 and 1.5 µM. HTRA2/Omi is trimeric and functions as a serine protease. The serine protease activity may play a more central role in apoptosis than its IAP antagonizing function. A PDZ domain regulates the serine protease activity by blocking access to the active site.

References:

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2. van Loo, G. *et al.* (2002) *Cell Death & Diff.* **9**:20.
3. Hedge, R. *et al.* (2001) *J. Biol. Chem.* **277**:432.
4. Verhagen, A. *et al.* (2001) *J. Biol. Chem.* **277**:445.
5. Martins, L. *et al.* (2002) *J. Biol. Chem.* **277**:439.
6. Silke, J., and A. Verhagen (2002) *Cell Death & Diff.* **9**:362.
7. Savopoulos, J. *et al.* (2000) *Protein Expression & Purification* **19**:227.