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Product Information

Anti-HtrA2 (C-terminal)
produced in rabbit, affinity isolated antibody

Product Number **H7165**

Product Description

Anti-HtrA2 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human HtrA2 (GeneID 27429), conjugated to KLH. The corresponding sequence is identical in HtrA2 isoform 2 and is highly conserved in rat and mouse HtrA2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-HtrA2 (C-terminal) specifically recognizes human and rat HtrA2. The antibody can be used in several immunochemical techniques including immunoblotting (~36 kDa). Detection of the HtrA2 band by immunoblotting is specifically inhibited by the HtrA2 immunizing peptide.

HtrA2 (HtrA serine peptidase 2, also known as Omi, PARK13, PRSS25) belongs to the HtrA family of serine proteases that exhibit endoproteolytic activity by cleaving misfolded proteins and other cellular proteins.[1] HtrA2 is a mitochondrial serine protease that consists of a N-terminal mitochondrial localization sequence (MLS), an inhibitor of apoptosis protein (IAP) binding domain (IBM), a single C-terminal PDZ domain that mediates protein-protein interaction, and a conserved catalytic domain of serine proteases.[2] HtrA2 is predominantly localized to the mitochondria and its protease activity is required for mitochondrial homeostasis. Mutations that inactivate HtrA2 are associated with neurodegenerative diseases such as Parkinson's disease and Alzheimer's disease.[3,4] HtrA2 is released from the mitochondria as a mature form in response to apoptotic stimuli, and is involved in regulating apoptosis through multiple pathways, including caspase-dependent and caspase-independent cell death.[5,6] Mature HtrA2 promotes cytochrome c-dependent caspase activation by neutralizing inhibitor of apoptosis proteins (IAPs) via its IAP binding domain. Processing of HtrA2 exposes an internal motif, which is conserved in the IAP inhibitor SMAC/Diablo. HtrA2 induces caspase-independent apoptosis through its serine protease activity, independent of IAP inhibition. HtrA2 mutant lacking the IAP-binding domain have also been shown to induce apoptosis, suggesting a non-redundant function of HtrA2 in induction of apoptosis.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 μg/mL is recommended using a rat liver microsomal fraction.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,ER,TD,KAA,PHC,MAM 03/19-1