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Store at -20C
#2176

HtrA2 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	36	Rabbit	#O43464	27429

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

HtrA2 Antibody detects endogenous levels of the mature form of HtrA2. This antibody is expected to also recognize the unprocessed form of HtrA2. The unprocessed form is detected in cells overexpressing HtrA2.

Species predicted to react based on 100% sequence homology

Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe341 of HtrA2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

High temperature requirement protein A2 (HtrA2)/Omi is a serine protease with homology to the *E. coli* HtrA protein (DegP) and is thought to be involved in apoptosis and stress-induced degradation of misfolded proteins (1). While HtrA2 was originally identified to be present in either the nucleus (1) or endoplasmic reticulum (2), subsequent studies have shown that it localizes in mitochondria and is released during apoptosis (3-7). HtrA2 is produced as a 50 kDa zymogen that is cleaved to generate a 36 kDa mature protein that exposes an amino terminal motif (AVPS) resembling that of the IAP inhibitor Smac/Diablo (3-7). Like Smac, interaction between HtrA2 and IAP family members, such as XIAP, antagonizes their inhibition of caspase activity and protection from apoptosis (3-7). Interestingly, HtrA2 knock-out mice did not show signs of reduced apoptosis, but rather had a loss of neurons in the striatum and a Parkinson's-like phenotype, suggesting that HtrA2 might have a neuroprotective function (8-10). This activity is associated with the protease activity of HtrA2 (8). Furthermore, research studies have shown that loss of function mutations in the HtrA2 gene are associated with Parkinson's disease (11).

Background References

1. Gray, C.W. et al. (2000) *Eur. J. Biochem.* 267, 5699-5710.
2. Faccio, L. et al. (2000) *J. Biol. Chem.* 275, 2581-2588.
3. Suzuki, Y. et al. (2001) *Mol. Cell* 8, 613-621.
4. Hegde, R. et al. (2002) *J. Biol. Chem.* 277, 432-438.
5. Martins, L.M. et al. (2002) *J. Biol. Chem.* 277, 439-444.
6. van Loo, G. et al. (2002) *Cell Death Differ.* 9, 20-26.
7. Verhagen, A.M. et al. (2002) *J. Biol. Chem.* 277, 445-454.
8. Jones, J.M. et al. (2003) *Nature* 425, 721-727.
9. Vaux, D.L. and Silke, J. (2003) *Cell* 115, 251-253.
10. Martins, L.M. et al. (2004) *Mol. Cell Biol.* 24, 9848-9862.
11. Strauss, K.M. et al. (2005) *Hum. Mol. Genet.* 14, 2099-2111.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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