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Cathepsin D Antibody

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

Applications: W	Reactivity: H Mk	Sensitivity: Endogenous	MW (kDa): 46, 43, 28	Source/Isotype: Rabbit	UniProt ID: #P07339	Entrez-Gene Id: 1509
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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

Cathepsin D Antibody detects endogenous levels of preprocathepsin D, procathepsin D and the heavy chain subunit of mature cathepsin D.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues with the heavy chain subunit of human Cathepsin D. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Cathepsin D is a ubiquitously expressed lysosomal aspartyl protease involved in the normal degradation of proteins (1). It is synthesized as an inactive 43 kDa preprocathepsin D that is cleaved and glycosylated to form a 46 kDa procathepsin D and then further cleaved to produce 28 kDa and 15 kDa subunits (heavy and light chains, respectively) (2). Cathepsin D may also be secreted into the cytosol during apoptosis and contribute to cleavage of substrates implicated in the apoptotic pathway (3). Numerous studies have suggested that cathepsin D plays a role in neuronal degradation and malignant transformation, particularly in breast cancer (4-9).

Background References

1. Faust, P.L. et al. (1985) *Proc. Natl. Acad. Sci. USA* 82, 4910-4.
2. Erickson, A.H. et al. (1981) *J. Biol. Chem.* 256, 11224-31.
3. Liaudet-Coopman, E. et al. (2006) *Cancer Lett.* 237, 167-79.
4. Berchem, G. et al. (2002) *Oncogene* 21, 5951-5.
5. Nomura, T. and Katunuma, N. (2005) *J. Med. Invest.* 52, 1-9.
6. Garcia, M. et al. (1996) *Stem Cells* 14, 642-50.
7. Nogami, M. et al. (2000) *Histochem. J.* 32, 505-8.
8. Nakanishi, H. (2003) *Ageing Res. Rev.* 2, 367-81.
9. Callahan, L.M. et al. *Neurobiol. Aging* 19, S99-105.

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 **Mk:** Monkey

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