Recombinant Cathepsin B/CTSB Monoclonal Antibody

catalog number: AN300470P

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

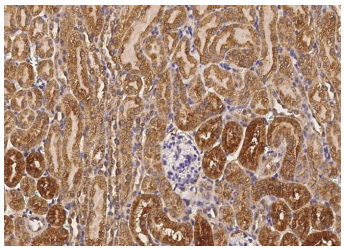
Reactivity	Mouse
Immunogen	Recombinant Mouse Cathepsin B/CTSB Protein
Host	Rabbit
Isotype	IgG
Clone	B396
Purification	Protein A
Buffer	0.2 μm filtered solution in PBS

Applications	Recommended Dilution
IHC-P	1:100-1:500

Data



Immunohistochemistry of paraffin-embedded mouse liver using Cathepsin B/CTSB Monoclonal Antibody at dilution of 1:200.



Immunohistochemistry of paraffin-embedded mouse kidney using Cathepsin B/CTSB Monoclonal Antibody at dilution of 1:200.

Preparation & Storage

Storage	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
Shipping	Ice bag

Background

Toll-free: 1-888-852-8623
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Cathepsin B is a papain-family cysteine protease that is normally located in lysosomes, where it is involved in the turnover of proteins and plays various roles in maintaining the normal metabolism of cells. This protease has been implicated in pathological conditions, e.g., tumor progression and arthritis. In disease conditions, increases in the expression of cathepsin B occur at both the gene and protein levels. Cathepsin B is synthesized as a preproenzyme and the primary pathways for its normal trafficking to the lysosome utilize mannose 6-phosphate receptors (MPRs). Mature cathepsin B has the ability to degrade several extracellular matrix components at both neutral and acidic pH and has been implicated in the progression of several human and rodent tumors progression and arthritis. Cathepsin B expression is increased in many human cancers at the mRNA, protein and activity levels. It is also frequently overexpressed in premalignant lesions, an observation that associates this protease with local invasive stages of cancer. Increased expression of cathepsin B in primary cancers, and especially in preneoplastic lesions, suggests that this enzyme might have pro-apoptotic features. Active cathepsin B is also secreted from tumours, a mechanism likely to be facilitated by lysosomal exocytosis or extracellular processing by surface activators. Cathepsin B is localized to caveolae on the tumour surface, where binding to the annexin II heterotetramer occurs. Thus CTSB is suggested as a tumor marker. Additionally, Cathepsin B can degrade extracellular matrix proteins, such as collagen IV and laminin, and can activate the precursor form of urokinase plasminogen activator (uPA), perhaps thereby initiating an extracellular proteolytic cascade.

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