Data Sheet (Cat.No.TMAH-00317)

TargetMol

Anti-CTSL Antibody (4A135)

Product Details

Ig Type:	Mouse IgG2a
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4A135
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. IHC image of TMAH-00317 diluted at 1:30 and staining in paraffin-embedded human liver cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-Mouse IgG labeled by HRP and visualized using 0.05% DAB. 2. IHC image of TMAH-00317 diluted at 1:30 and staining in paraffin-embedded human placenta tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-Mouse IgG labeled by HRP and visualized using 0.05% DAB. 3. Immunofluorescence staining of NIH/3T3 cell with TMAH-00317 at 1:10, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Mouse IgG(H+L).
Application:	ELISA,IF,IHC
Recommended	IHC:1:20-1:200; IF:1:20-1:200.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human CTSL Protein
Antigen Species:	Human
Gene ID:	1514
Uniprot ID:	P07711
Synonyms:	FLJ31037;CTSL;CATL;MEP;cathepsin L;CTSL1
Biology Area:	Neuroscience, Signal transduction

Research Background

Thiol protease important for the overall degradation of proteins in lysosomes (Probable). Plays a critical for normal cellular functions such as general protein turnover, antigen processing and bone remodeling. Involved in the solubilization of cross-linked TG/thyroglobulin and in the subsequent release of thyroid hormone thyroxine (T4) by limited proteolysis of TG/thyroglobulin in the thyroid follicle lumen. In neuroendocrine chromaffin cells secretory vesicles, catalyzes the prohormone proenkephalin processing to the active enkephalin peptide neurotransmitter. In thymus, regulates CD4(+) T cell positive selection by generating the major histocompatibility complex class II (MHCII) bound peptide ligands presented by cortical thymic epithelial cells. Also mediates invariant chain processing in cortical thymic epithelial cells. Major elastin-degrading enzyme at neutral pH. Accumulates as a mature and active enzyme in the extracellular space of antigen presenting cells (APCs) to regulate degradation of the extracellular matrix in the course of inflammation. Secreted form generates endostatin from COL18A1. Critical for cardiac morphology and function. Plays an important role in hair follicle morphogenesis and cycling, as well as epidermal differentiation. Required for maximal stimulation of steroidogenesis by TIMP1. Functions in the regulation of cell cycle progression through proteolytic processing of the CUX1 transcription factor. Translation initiation at downstream start sites allows the synthesis of isoforms that are devoid of a signal peptide and localize to the nucleus where they cleave the CUX1 transcription factor and modify its DNA binding properties. (Microbial infection) In cells lacking TMPRSS2 expression, facilitates human coronaviruses SARS-CoV and SARS-CoV-2 infections via a slow acid-activated route with the proteolysis of coronavirus spike (S) glycoproteins in lysosome for entry into host cell. Proteolysis within lysosomes is sufficient to activate membrane fusion by coronaviruses SARS-CoV and EMC (HCoV-EMC) S as well as Zaire ebolavirus glycoproteins.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481