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# Cathepsin B

Catalog # PVGS1652

## Product Information

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| **Primary Accession** | P07858 |
| **Species** | Human |
| **Sequence** | Arg18-Ile339 |
| **Purity** | > 95% as analyzed by SDS-PAGE |
| **Endotoxin Level** | |
| **Expression System** | Human cells |
| **Formulation** | Supplied as a 0.2 □m filtered solution in PBS, pH 7.4. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at -70°C or below, the product can be stored for 2-3 weeks at 2-8°C or 3 months at -20°C. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 1508 |
| **Other Names** | Cathepsin B, 3.4.22.1, APP secretase, APPS, Cathepsin B1, Cathepsin B light chain, Cathepsin B heavy chain, CTSB, CPSB |
| **Target Background** | Cathepsin B is an enzymatic protein belonging to the peptidase (or protease) families. The protein encoded by this gene is a lysosomal cysteine protease composed of a dimer of disulfide-linked heavy and light chains, both produced from a single protein precursor. It is a member of the peptidase C1 family. At least five transcript variants encoding the same protein have been found for this gene. Cystatin-B / CSTB is an intracellular thiol proteinase inhibitor. Tightly binding reversible inhibitor of cathepsins L, H and B. Cystatin-B / CSTB is able to form a dimer stabilized by noncovalent forces, inhibiting papain and cathepsins l, h and b. Cystatin-B / CSTB is also thought to play a role in protecting against the proteases leaking from lysosomes. |

## Protein Information

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| **Name** | CTSB |
| **Synonyms** | CPSB |
| **Function** | Thiol protease which is believed to participate in intracellular degradation and turnover of proteins (PubMed:12220505). Cleaves matrix extracellular phosphoglycoprotein MEPE (PubMed:12220505). Involved in the solubilization |

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| | of cross-linked TG/thyroglobulin in the thyroid follicle lumen (By similarity). Has also been implicated in tumor invasion and metastasis (PubMed:3972105). |
| **Cellular Location** | Lysosome. Melanosome. Secreted, extracellular space {ECO:0000250\|UniProtKB:A1E295}. Apical cell membrane {ECO:0000250\|UniProtKB:P10605}; Peripheral membrane protein {ECO:0000250\|UniProtKB:P10605}; Extracellular side {ECO:0000250\|UniProtKB:P10605}. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065) Localizes to the lumen of thyroid follicles and to the apical membrane of thyroid epithelial cells (By similarity) {ECO:0000250\|UniProtKB:P10605, ECO:0000269\|PubMed:17081065} |
| **Tissue Location** | Expressed in the stratum spinosum of the epidermis. Weak expression is detected in the stratum granulosum |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.