# Carboxypeptidase A4 (CPA4) Human Active Protein

## PRODUCT OVERVIEW

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| **Product Name** | Carboxypeptidase A4 (CPA4), Active Protein |
| **Full Product Name** | Human Carboxypeptidase A4 Recombinant |
| **Product Gene Name** | CPA4 active protein |
| **Host** | HEK293 cells (Note: Host protein expression may be lot-specific and can be subject to change during production, including bulk orders.) |
| **Form/Format** | Recombinant Carboxypeptidase A4 (A3) is lyophilized from 0.2 um filtered PBS solution, pH7.2, 5% Trehalose. |
| **Purity/Purification** | >95%, as determined by SDS-PAGE and HPLC |
| **Preparation and Storage** | Recombinant Carboxypeptidase A4 (CPA4) can be stored in working aliquots at 2 degree -8 degree C for one month, or at-20 degree C to-70 degree Cfor twelve months. Avoid repeated freeze/thaw cycles. |
| **Molecular Weight** | 43,570 Da |
| **OMIM** | AF095719 mRNA |
| **3D Structure** | ModBase 3D Structure for Q9UI42 |
| **Active Protein Note** | Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product. |
| **Source** | Optimized DNA sequence encoding Human Carboxypeptidase A4(GLY17-TYR421) preprotein including a C-terminal His tag was expressed in HEK293 cells. |
| **Endotoxin** | Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/ug (1EU/ug). |
| **Biological Activity** | The activity was tested by the ability to cleave a fluorogenic substrate Ac-Phe-Thiaphe-OH in the presence of 5,5'Dithio-bis. The specific activity was measured to be 3 nmole/ug/min |
| **Molecular Function** | Hydrolase |
| **Reconstitution** | A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers. |
| **Product Categories/Family for CPA4 active protein** | Recombinant Human Cytokines; Cytokines |
| **Related Product Information for CPA4 active protein** | MBS554354 is an active protein targeting CPA4. Also known as Human Carboxypeptidase A4 Recombinant. Host: HEK293 cells (Note: Host protein expression may be lot-specific and can be subject to change during production, including bulk orders.). |
| **Other Notes** | Small volumes of CPA4 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CPA4. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 254540196 |
| **NCBI GeneID** | 51200 |
| **NCBI Accession #** | NP_001156918.1 |

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| **UniProt Primary Accession #** | Q9UI42 |
| **UniProt Secondary Accession #** | Q86UY9; B7Z576 |
| **UniProt Related Accession #** | Q9UI42 |
| **GenBank Nucleotide #** | NM_001163446.1 |
| **NCBI Official Full Name** | carboxypeptidase A4 isoform 2 |
| **NCBI Official Synonym Full Names** | carboxypeptidase A4 |
| **NCBI Official Symbol** | CPA4 |
| **NCBI Official Synonym Symbols** | CPA3 |
| **UniProt Protein Name** | Carboxypeptidase A4 |
| **UniProt Synonym Protein Names** | Carboxypeptidase A3 |
| **Protein Family** | Carboxypeptidase |
| **UniProt Gene Name** | CPA4 |
| **UniProt Synonym Gene Names** | CPA3 |
| **NCBI Protein Information** | carboxypeptidase A4 |
| **NCBI Summary for CPA4** | This gene is a member of the carboxypeptidase A/B subfamily, and it is located in a cluster with three other family members on chromosome 7. Carboxypeptidases are zinc-containing exopeptidases that catalyze the release of carboxy-terminal amino acids, and are synthesized as zymogens that are activated by proteolytic cleavage. This gene could be involved in the histone hyperacetylation pathway. It is imprinted and may be a strong candidate gene for prostate cancer aggressiveness. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for CPA4** | CPA4: Metalloprotease that could be involved in the histone hyperacetylation pathway. Belongs to the peptidase M14 family. 2 isoforms of the human protein are produced by alternative splicing.<br><br>Protein type: EC 3.4.17.-; Protease; Secreted; Secreted, signal peptide<br><br>Chromosomal Location of Human Ortholog: 7q32.2<br><br>Cellular Component: extracellular space<br><br>Molecular Function: metallocarboxypeptidase activity |
| **Research Articles on CPA4** | **1.** The crystal structure of the human CPA4 carboxypeptidase in complex with SmCI, a peptide protease inhibitor. |
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