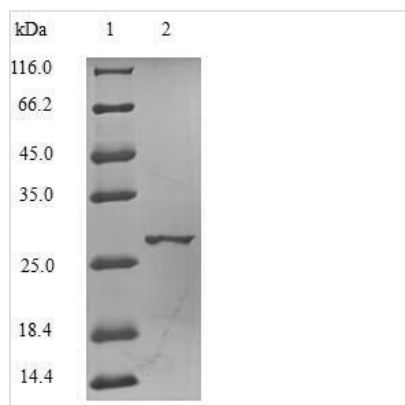




Recombinant Human Catechol O-methyltransferase (COMT), partial

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|--------------------------|---|
| Product Code | CSB-EP005779HU |
| Relevance | Catalyzes the O-methylation, and thereby the inactivation, of catecholamine neurotransmitters and catechol hormones. Also shortens the biological half-lives of certain neuroactive drugs, like L-DOPA, alpha-methyl DOPA and isoproterenol. |
| Abbreviation | Recombinant Human COMT protein, partial |
| Storage | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| Uniprot No. | P21964 |
| Product Type | Recombinant Protein |
| Immunogen Species | Homo sapiens (Human) |
| Purity | Greater than 90% as determined by SDS-PAGE. |
| Sequence | GDTKEQRILNHVLQHAEPGNAQSVLEAIDTYCEQKEWAMNVGDKKGGKIVDAVI QEHQPSVLLELGAYCGYSAVRMARLLSPGARLITIEINPDCAAITQRMVDFAGV KDKVTLVVGASQDIIPQLKKKYDVDTLDMVFLDHWKDRYLPDTLLLEECGLLRK GTVLLADNVICPGAPDFLAHVIRGSSCFECTHYQSFLYREVVDGLEKAIYKGP GSEAGP |
| Research Area | Metabolism |
| Source | E.coli |
| Target Names | COMT |
| Expression Region | 52-271aa |
| Notes | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| Tag Info | N-terminal 6xHis-tagged |
| Mol. Weight | 28.3kDa |
| Protein Length | Partial |
| Image | |



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant Human COMT was expressed with the amino acid range of 52-271. This COMT protein is theoretically predicted to have a molecular weight of 28.3 kDa. This protein is generated in a e.coli-based system. The COMT gene fragment has been modified by fusing the N-terminal 6xHis tag, providing convenience in detecting and purifying the recombinant COMT protein during the following stages.

The human catechol O-methyltransferase (COMT) is a crucial enzyme involved in the metabolism of catecholamines, including dopamine, norepinephrine, and epinephrine. Its primary function is the methylation of catechol groups, playing a vital role in regulating neurotransmitter levels in the brain. The COMT gene exhibits polymorphisms, influencing enzyme activity and impacting cognitive and emotional processes. Research on COMT extends to neuropsychiatric disorders such as schizophrenia, bipolar disorder, and mood disorders, exploring associations between genetic variations and susceptibility to these conditions. Additionally, COMT inhibitors are investigated as potential therapeutics, contributing to advancements in neuropharmacology and personalized medicine. Understanding the multifaceted functions of COMT provides valuable insights into neurotransmitter regulation and its implications for mental health and therapeutic interventions.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.