

COMT Protein, Human (His)

Cat. No.:	HY-P72149
Synonyms:	Catechol O methyltransferase; Catechol O-methyltransferase; COMT; COMT_HUMAN; EC 2.1.1.6
Species:	Human
Source:	E. coli
Accession:	P21964 (G52-P271)
Gene ID:	1312
Molecular Weight:	25-28 kDa

PROPERTIES

AA Sequence	G D T K E Q R I L N H V L Q H A E P G N A Q S V L E A I D T Y C E Q K E W A M N V G D K K G K I V D A V I Q E H Q P S V L L E L G A Y C G Y S A V R M A R L L S P G A R L I T I E I N P D C A A I T Q R M V D F A G V K D K V T L V V G A S Q D I I P Q L K K K Y D V D T L D M V F L D H W K D R Y L P D T L L L E E C G L L R K G T V L L A D N V I C P G A P D F L A H V R G S S C F E C T H Y Q S F L E Y R E V V D G L E K A I Y K G P G S E A G P
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0 or 50 mM Tris-HCl, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Catechol-O-methyltransferase (COMT) is a crucial enzyme that catalyzes the O-methylation and subsequent inactivation of catecholamine neurotransmitters and catechol hormones. By mediating the transfer of a methyl group to these molecules, COMT plays a pivotal role in regulating the levels and activity of neurotransmitters such as dopamine, epinephrine, and norepinephrine. Beyond its involvement in catecholamine metabolism, COMT also shortens the biological half-lives of
------------	--

specific neuroactive drugs, including L-DOPA, alpha-methyl DOPA, and isoproterenol. This enzymatic activity is significant in modulating the pharmacokinetics of therapeutic agents targeting neurological and hormonal pathways. The regulatory role of COMT in both endogenous neurotransmitters and exogenous drugs highlights its importance in the fine-tuning of neurotransmission and drug responses, showcasing its broad impact on physiological and pharmacological processes.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA