

# Recombinant Human Catechol-O-methyltransferase, His-tagged

**Cat. No.** COMT-126H    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Recombinant human COMT protein was expressed in E.coli and purified by using conventional chromatography techniques, 24.4 kDa (221 aa).

### Species

Human

### Source

E.coli

### Description

Catechol-O-methyltransferase (COMT) is an enzyme that catalyses the transfer of the methyl group of S-adenosylmethionine (SAM) into catechol substrates such as levodopa, dopamine, epinephrine, and norepinephrine in the presence of Mg<sup>2+</sup>. COMT appears to be located in the postsynaptic neuron and plays roles in the metabolism of catechol estrogens and the inactivation of catecholamine neurotransmitters through enzymatic degradation. COMT inhibitors prevent levodopa degradation, increase its availability and are used in the treatment of patients with Parkinson's disease.

### Sequences of amino acids

MGDTKEQRIL NHVLQHAEPG NAQSVLEAID TYCEQKEWAM NVGDKKGGKIV  
 DAVIQEHQPS VLLELGAYCG YSAVRMARLL SPGARLITIE INPDCAAITQ  
 RMVDFAGVKD KVTLVVGASQ DIIPQLKKKY DVDTLDMVFL DHWKDRYLPD  
 TLLLEECGLL RKGTVLLADN VICPGAPDFL AHVRGSSCFE CTHYQSFLEY  
 REVVDGLEKA IYKGGPSEAG P

### Formulation

Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM MgCl<sub>2</sub> 10% glycerol

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<b>Purity</b>	> 95% by SDS - PAGE
<b>Concentration</b>	1 mg/ml (determined by Bradford assay)
<b>Endotoxin Level</b>	< 1.0 EU per 1ug of protein (determined by LAL method)
<b>Storage</b>	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

## GENE INFORMATION

<b>Gene Name</b>	COMT catechol-O-methyltransferase [ Homo sapiens ]
<b>Synonyms</b>	catechol-O-methyltransferase; EC 2.1.1.6
<b>Gene ID</b>	1312
<b>mRNA Refseq</b>	NM_000754
<b>Protein Refseq</b>	NP_000745
<b>MIM</b>	116790
<b>UniProt ID</b>	P21964
<b>Chromosome Location</b>	22q11.21-q11.23; 22q11.21
<b>Pathway</b>	Tyrosine metabolism; Biological oxidations; Synaptic Transmission
<b>Function</b>	catechol O-methyltransferase activity; catechol O-methyltransferase activity;

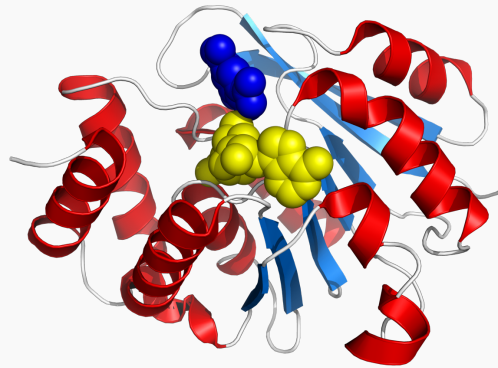
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magnesium ion binding; protein binding; transferase activity

**Cartoon diagram of human COMT in complex with 3,5-dinitrocatechol (dark blue) and S-adenosyl methionine (yellow). From PDB3BWM**



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