

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 ²⁺ . 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 IYKGPGEAG P
Formulation	Liquid. In 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM MgCl ₂ 10% glycerol

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Purity	> 95% by SDS - PAGE
Concentration	1 mg/ml (determined by Bradford assay)
Endotoxin Level	< 1.0 EU per 1ug of protein (determined by LAL method)
Storage	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

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

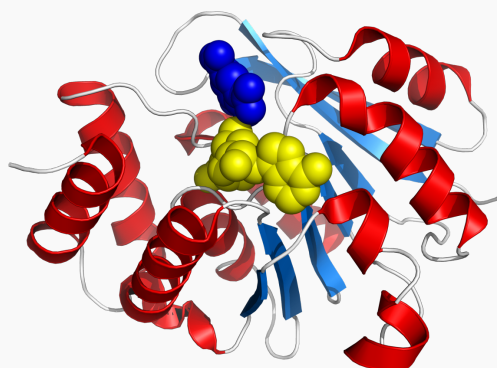
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magnesium ion binding; protein binding; transferase activity

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



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