

# Active Recombinant Human COMT Protein, His-tagged

Cat. No. COMT-1707H Lot. No. (See product label)

## SPECIFICATION

**Product Overview** Recombinant Human COMT protein was expressed in E. coli with His tag.

**Species** Human

**Source** E.coli

### Description

Catechol-O-methyltransferase (COMT) catalyzes the transfer of the methyl group from S-adenosyl-L-methionine to either the meta- or the para-hydroxyl group of the catechol ring from a variety of endogenous and exogenous catechol substrates including the neurotransmitters dopamine, epinephrine, and norepinephrine. Thus, it plays important roles in one of the major degradative pathways of the catecholamine transmitters, and in the metabolism of catechol drugs used in the treatment of hypertension, asthma, and Parkinson's disease. In tissues, COMT is produced as two distinct forms, a soluble protein (residues 52-271) and a membrane-bound protein that possesses the N-terminal transmembrane domain. A common single-nucleotide polymorphism results in substitution of methionine for valine at position 158 of membrane-bound COMT and position 108 at soluble COMT. This amino acid change results in a more unstable and three- to four-fold less active 108/158Met form. Since COMT activity is the major regulator of dopamine function in the prefrontal brain region, the Val108/158Met variation is considered to be associated with increased risk of a wide spectrum of mental disorders.

**Form** 0.2 µm filtered solution in Tris, NaCl and Glycerol.

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<b>Bio-activity</b>	Measured by its ability to methylate catechol to O-methyl-catechol. The specific activity is >95 pmol/min/μg.
<b>Molecular Mass</b>	25 kDa
<b>Endotoxin</b>	<0.10 EU per 1 μg of the protein by the LAL method.
<b>Purity</b>	> 90%
<b>Storage</b>	6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.

## GENE INFORMATION

<b>Gene Name</b>	COMT catechol-O-methyltransferase [ Homo sapiens ]
<b>Official Symbol</b>	COMT
<b>Synonyms</b>	COMT; 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

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