

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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Bio-activity	Measured by its ability to methylate catechol to O-methyl-catechol. The specific activity is >95 pmol/min/μg.
Molecular Mass	25 kDa
Endotoxin	<0.10 EU per 1 μg of the protein by the LAL method.
Purity	> 90%
Storage	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

Gene Name	COMT catechol-O-methyltransferase [Homo sapiens]
Official Symbol	COMT
Synonyms	COMT; catechol-O-methyltransferase; EC 2.1.1.6
Gene ID	1312
mRNA Refseq	NM_000754
Protein Refseq	NP_000745
MIM	116790
UniProt ID	P21964

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