

Catechol-O-Methyltransferase Active Protein | COMT active protein

Active Catechol-O-Methyltransferase (COMT)

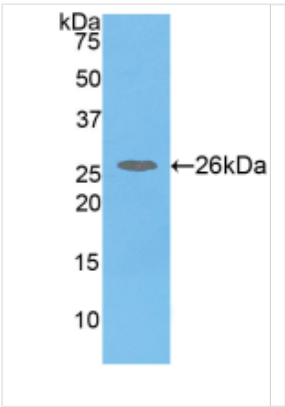
CATALOG # AAA150144	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Catechol-O-Methyltransferase; Active Catechol-O-Methyltransferase (COMT); COMT active protein

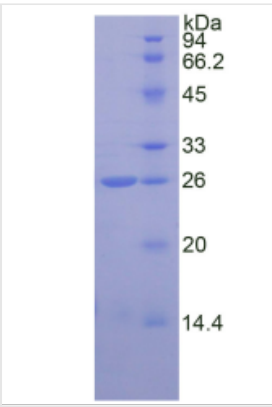
PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>98%
Form/Format	PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.
Applicable Applications for COMT active protein	Activity Assay, Cell Culture
Source	Prokaryotic expression.
Residues	Gly52~Pro271
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	5.6
Usage	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



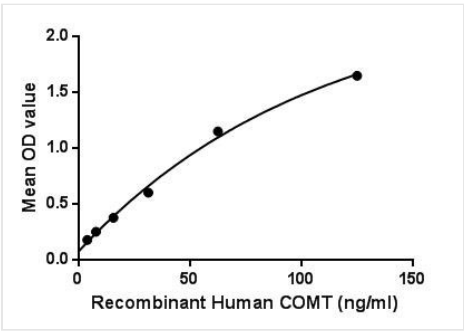
WB (Western Blot)

Figure 3. Western BlotSample: Recombinant COMT, Human;Antibody: Rabbit Anti-Human COMT Ab



SDS-PAGE

Figure 2. SDS-PAGESample: Active recombinant COMT, Human



GDTKEQRIL NHVLQHAEPG NAQSVLEAID TYCEQKEWAM NVGDKKGIKIV
DAVIQEHOPS VLLELGAYCG YSAVRMARLL SPGARLITIE INPDCAAITQ
RMVDFAGVKD KVTLVVGASQ DIIPQLKKKY DVTLDMMVFL DHWKDRYLPD
TLLLEECGLL RKGTVLLADN VICPGAPDFL AHVRGSSCFE CTHYQSFLFY
REVVDGLEKA IYKPGSEAG P

Sequence

Bioactivity

Catechol-O-Methyltransferase (COMT) is one of several enzymes that degrade catecholamines (such as dopamine, epinephrine, and norepinephrine), catecholestrogens, and various drugs and substances having a catechol structure. Two isoforms of COMT are produced: the soluble short form (S-COMT) and the membrane bound long form (MB-COMT). COMT is involved in the inactivation of the catecholamine neurotransmitters (dopamine, epinephrine, and norepinephrine). The enzyme introduces a methyl group to the catecholamine, which is donated by S-adenosyl methionine (SAM). Any compound having a catechol structure, like catecholestrogens and catechol-containing flavonoids, are substrates of COMT. Besides, UDP glucuronosyltransferase 2 family, polypeptide B1 (UGT2B1) has been identified as an interactor of COMT, thus a binding ELISA assay was conducted to detect the interaction of recombinant human COMT and recombinant human UGT2B1. Briefly, COMT were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to UGT2B1-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-COMT pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of COMT and UGT2B1 was shown in Figure 1, and this effect was in a dose dependent manner. Figure 1. The binding activity of COMT with UGT2B1.

ADDITIONAL INFORMATION

Product Categories/Family for COMT active protein	Enzyme & Kinase
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4502969
NCBI GeneID	1312
NCBI Accession #	NP_000745.1
NCBI GenBank Nucleotide #	NP_000745.1

UniProt Accession #	P21964
Molecular Weight	Predicted Molecular Mass: 25.6kDa Accurate Molecular Mass: 26kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	catechol O-methyltransferase isoform MB-COMT
NCBI Official Synonym Full Names	catechol-O-methyltransferase
NCBI Official Symbol	COMT
NCBI Official Synonym Symbols	HEL-S-98n
NCBI Protein Information	catechol O-methyltransferase
UniProt Protein Name	Catechol O-methyltransferase
UniProt Gene Name	COMT
UniProt Entry Name	COMT_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-comt-homo-sapiens-human-active-protein/catechol-o-methyltransferase/150144>