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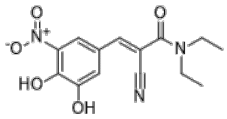
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	Entacapone
Cat. No.	:	PC-27365
CAS No.	:	130929-57-6
Molecular Formula	:	$C_{14}H_{15}N_3O_5$
Molecular Weight	:	305.29
Target	:	COMT
Solubility	:	10 mM in DMSO



Biological Activity

Entacapone is a potent, reversible, peripherally acting and orally active catechol-O-methyltransferase (COMT) inhibitor with IC50 values of 10 nM, 20 nM, and 160 nM for COMT from rat brain, erythrocytes and liver respectively.
Entacapone is selective for COMT over other catecholamine metabolizing enzymes, including MAO-A, MAO-B, phenolsulphotransferase M (PST-M) and PST-P (IC50s>50 μM).
Entacapone also is an inhibitor of FTO demethylation with IC50 of 3.5 uM, directly binds to FTO and inhibits FTO activity in vitro, reduces body weight and lowered fasting blood glucose concentrations in diet-induced obese mice.
Entacapone also is a small molecule capable of targeting Myoferlin (MYOF), blocks nuclear transport of phosphorylated STAT3 and suppresses downstream signaling, significantly impedes glioma development across experimental models.

References

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Zhao P, et al. Cell Death Discov. 2026 Jul 14. doi: 10.1038/s41420-026-03254-0.

Shiming Peng, et al. Sci Transl Med. 2019 Apr 17;11(488):eaau7116.

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