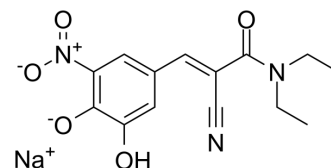


Entacapone sodium salt

Cat. No.:	HY-14280A
CAS No.:	1047659-02-8
Molecular Formula:	C ₁₄ H ₁₄ N ₃ NaO ₅
Molecular Weight:	327.27
Target:	COMT
Pathway:	Metabolic Enzyme/Protease; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Entacapone sodium salt is a potent, reversible, peripherally acting and orally active catechol-O-methyltransferase (COMT) inhibitor. Entacapone sodium salt inhibits COMT from rat brain, erythrocytes and liver with IC ₅₀ values of 10 nM, 20 nM, and 160 nM, respectively. Entacapone sodium salt is selective for COMT over other catecholamine metabolizing enzymes, including MAO-A, MAO-B, phenolsulphotransferase M (PST-M) and PST-P (IC ₅₀ s > 50 μM). Entacapone sodium salt can be used for the research of Parkinson's disease ^[1] . Entacapone sodium salt serves as an inhibitor of FTO demethylation with an IC ₅₀ of 3.5 μM, can be used for the research of metabolic disorders ^[2] .
IC₅₀ & Target	IC ₅₀ : 10 nM (rat brain COMT); 20 nM (rat erythrocyte COMT); 160 nM (rat liver COMT) ^[1]
In Vitro	Entacapone sodium salt (50 μM, 48 hours) enhances the amount of m6A on mRNA in Hep-G2 cells. It does not show any inhibitory effect on the enzymatic activity of the RNA m6A demethylase AlkB homolog 5 (ALKBH5) or the ten-eleven translocation methylcytosine dioxygenase 1 (TET1), nor does it alter the DNA methylation or histone methylation patterns in Entacapone sodium salt-treated Hep-G2 cells ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Entacapone sodium salt (oral administration; 600 mg/kg per day; 3-9 weeks) results in a dose-response effect dose-response effect. After 3 weeks, mouse body weight are decreased by 10.1% compared to controls, and shows similar food intake fat mass and fat mass ratio reduced after Entacapone sodium salt treatment. Entacapone sodium salt also increases the energy expenditure of mice: reductions in total cholesterol (17.6%), low-density lipoprotein cholesterol (31.0%), and triglycerides (10.2%) in mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sensor Actuat B-Chem. 2021, 129983.

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REFERENCES

[1]. E Nissinen, et al. Biochemical and pharmacological properties of a peripherally acting catechol-O-methyltransferase inhibitor Entacapone sodium salt . Naunyn Schmiedebergs Arch Pharmacol. 1992 Sep;346(3):262-6.

[2]. Shiming Peng, et al. Identification of Entacapone sodium salt as a chemical inhibitor of FTO mediating metabolic regulation through FOXO1. Sci Transl Med

Caution: Product has not been fully validated for medical applications. For research use only.

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