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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# Rivastigmine tartrate

**Cat. No.:** HY-11017

**CAS No.:** 129101-54-8

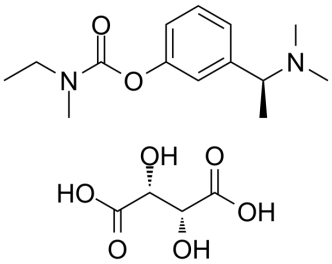
**Molecular Formula:** $C_{18}H_{28}N_2O_8$

**Molecular Weight:** 400.42

**Target:** Cholinesterase (ChE)

**Pathway:** Neuronal Signaling

**Storage:** 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : 50 mg/mL (124.87 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.4974 mL | 12.4869 mL | 24.9738 mL |
| | 5 mM | 0.4995 mL | 2.4974 mL | 4.9948 mL |
| | 10 mM | 0.2497 mL | 1.2487 mL | 2.4974 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (249.74 mM); Clear solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

Rivastigmine tartrate (ENA 713; SDZ-ENA 713) is an orally active and potent cholinesterase (ChE) inhibitor and inhibits butyrylcholinesterase (BChE) and acetylcholinesteras (AChE) with $IC_{50}$s of 0.037 μM, 4.15 μM, respectively. Rivastigmine tartrate can pass the blood brain barrier (BBB). Rivastigmine tartrate is a parasympathomimetic or cholinergic agent used for the research of mild to moderate dementia of the Alzheimer's type and dementia due to Parkinson's disease[1][2].

**$IC_{50}$ & Target**

IC50: 0.037 μM (BChE) and 4.15 μM (AChE)[1]

**In Vitro**

Rivastigmine tartrate (ENA 713; 1 μM; 24 hours) reduces LPS (2.5 μg/ml)-induced TNF-α and IL-6 by 50% and 46% combined with carbachol (10 μM), respectively and does not cause any significant reduction in pro-inflammatory cytokines [3].
Rivastigmine tartrate (1 μM), carbachol (10 μM), or a combination of both drugs, does not have a cytotoxic effect on activated cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Rivastigmine tartrate (ENA 713; 0.5-2.5 mg/kg; IP; 60 min before the tests) significantly and dose-dependently improved the

behavioral impairments caused by Aluminum (HY-B1521)[4].
Rivastigmine (0.5, 1 mg/kg/day; s.c; for 8 days) reduces by about 50% and 60% respectively, the concentration of IL-6 but not those of TNF-α and IL-1β in BALB/c OlaHsd male mice aged 8-9 weeks weighing 200–250 g with acute colitis[3].
Rivastigmine (1 mg/kg), but not (0.5 mg/kg), partially antagonized colon shrinkage and completely prevented bleeding. Treatment with rivastigmine (0.5 mg/kg) causes little change in these pathological manifestations, but rivastigmine (1 mg/kg) causes a partial restoration of the structure of the crypts and a reduction in sub-mucosal edema and cell infiltration.
Rivastigmine (1 mg/kg) causes a 4.7% reduction in body weight at the end of the experiment[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Male Wistar albino rats weighing 190–240 g (90 days old)[4] |
| Dosage: | 0.5, 1, 1.5 and 2.5 mg/kg |
| Administration: | IP; single dose |
| Result: | Significantly and dose-dependently improved the behavioral impairments caused by Aluminum (100 mg/kg/day; i.p.; for 60 days) |

## CUSTOMER VALIDATION

- Adv Sci (Weinh). 2021 Oct 31;e2100808.

See more customer validations on www.MedChemExpress.com

## REFERENCES


[1]. Qian-Sheng Yu, et al. Anticholinesterase activity of compounds related to geneserine tautomers. N-Oxides and 1,2-oxazines. J Med Chem. 2002 Aug 15;45(17):3684-91.

[2]. Han HJ, Lee JJ, Park SA et al. Efficacy and safety of switching from oral cholinesterase inhibitors to the rivastigmine transdermal patch in patients with probable Alzheimer's disease. J Clin Neurol. 2011 Sep;7(3):137-42.

[3]. Helena Shifrin, et al. Rivastigmine alleviates experimentally induced colitis in mice and rats by acting at central and peripheral sites to modulate immune responses. PLoS One. 2013;8(2):e57668.

[4]. Raafat A Abdel-Aal, et al. Rivastigmine reverses aluminum-induced behavioral changes in rats. Eur J Pharmacol. 2011 Jun 1;659(2-3):169-76.





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