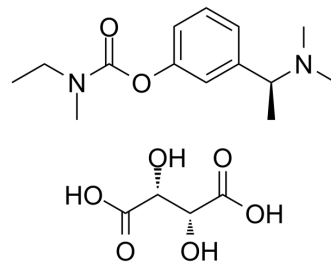


Rivastigmine tartrate

Cat. No.:	HY-11017
CAS No.:	129101-54-8
Molecular Formula:	C ₁₈ H ₂₈ N ₂ O 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 ₂ O : 50 mg/mL (124.87 mM; Need ultrasonic)				
	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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 acetylcholinesterase (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 parasymphomimetic 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]} .
IC₅₀ & Target	IC ₅₀ : 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-1 β 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.

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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.

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

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