

Small Molecules

Pterixin

Inhibits butyrylcholinesterase

Catalog #100-0897

5 mg



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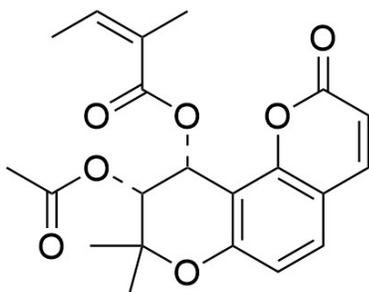
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Product Description

Pterixin is a dihydropyranocoumarin derivative that potently inhibits butyrylcholinesterase ($IC_{50} = 12.96 \mu M$; Orhan et al.). Butyrylcholinesterase is involved in the regulation of acetylcholine in the brain, and its activity level is higher in patients with Alzheimer's disease (Greig et al.). Butyrylcholinesterase inhibitors have been implicated as lead compounds for developing treatment for Alzheimer's disease (Orhan et al.).

Alternative Names:	Pterixin; (+)-Pterixin; Pterixine
CAS Number:	13161-75-6
Chemical Formula:	$C_{21}H_{22}O_7$
Molecular Weight:	386.4 g/mol
Purity:	$\geq 98\%$
Chemical Name:	(2Z)-2-methyl-2-butenic acid, (9R,10R)-9-(acetyloxy)-9,10-dihydro-8,8-dimethyl-2-oxo-2H,8H-benzo[1,2-b:3,4-b']dipyran-10-yl ester

Structure:



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at $-20^{\circ}C$ as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	<ul style="list-style-type: none">· DMSO ≤ 75 mM· Absolute ethanol ≤ 75 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 259 μL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at $-20^{\circ}C$. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

IMMUNOLOGY

· Blocks the production of LPS-induced nitric oxide in macrophages ($IC_{50} = 20 \mu M$; Matsuda et al.).

References

Greig NH et al. (2002) Butyrylcholinesterase: an important new target in Alzheimer's disease therapy. *Int psychogeriatrics* 14 Suppl 1: 77–91.

Matsuda H et al. (1998) Hepatoprotective and nitric oxide production inhibitory activities of coumarin and polyacetylene constituents from the roots of *Angelica furcijuga*. *Bioorg Med Chem Lett* 8(16): 2191–6.

Orhan IE et al. (2017) Pteryxin - A promising butyrylcholinesterase-inhibiting coumarin derivative from *Mutellina purpurea*. *Food Chem Toxicol* 109(Pt 2): 970–4.

Related Small Molecules

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