PRODUCT INFORMATION



Ligustrazine (hydrochloride)

Item No. 29658

CAS Registry No.:	76494-51-4
Formal Name:	2,3,5,6-tetramethyl-pyrazine,
	hydrochloride
Synonym:	2,3,5,6-Tetramethylpyrazine
MF:	$C_8H_{12}N_2 \bullet XHCI$
FW:	136.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 212, 293 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ligustrazine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ligustrazine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ligustrazine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ligustrazine (hydrochloride) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ligustrazine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ligustrazine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ligustrazine is a compound that has been found in L. wallichii and has diverse biological activities, including antioxidant, anti-inflammatory, neuroprotective, and anticancer properties.¹⁻³ It inhibits hydrogen peroxide-induced decreases in cell viability and the levels of superoxide dismutase (SOD) and glutathione peroxidase (GPX) and increases in reactive oxygen species (ROS) and malondialdehyde (MDA) levels in human umbilical vein endothelial cells (HUVECs) when used at concentrations of 100 and 150 µg/ml.¹ Ligustrazine (50 and 100 μ M) inhibits prostaglandin E₂ (PGE₂; Item No. 14010) production induced by LPS and IFN- γ in primary rat glia.² It reduces infarct volume, cortical edema, and cortical PGE₂ levels in a rat model of transient focal cerebral ischemia induced by common carotid artery and middle cerebral artery occlusion when administered at a dose of 20 mg/kg. Ligustrazine inhibits the proliferation of MG-63, Saos-2, and U2OS osteosarcoma cells (IC₅₀s = 10.3, 24.7, and 54.7 mg/ml, respectively) in vitro and reduces tumor growth in an MG-63 mouse xenograft model when administered at a dose of 100 mg/kg every other day.³

References

- 1. Li, W.-M., Liu, H.-T., Li, X.-Y., et al. Basic Clin. Pharmacol. Toxicol. 106(1), 45-52 (2010).
- 2. Liao, S.-L., Kao, T.-K., Chen, W.-Y., et al. Neurosci. Lett. 372(1-2), 40-45 (2004).
- 3. Wang, Y., Fu, Q., and Zhao, W. Mol. Med. Rep. 8(4), 984-988 (2013).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/11/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM