

Produktinformation



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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien T. +43(0)1 489 3961-0 F. +43(0)1 489 3961-7 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

Product Information



DL-Propargyl Glycine (hydrochloride)

Item No. 10010948

CAS Registry No.:	16900-57-5
Formal Name:	2-amino-4-pentynoic acid,
	monohydrochloride
Synonym:	PAG
MF:	$C_5H_7NO_2 \bullet HCl$
FW:	149.6
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

For long term storage, we suggest that DL-propargyl glycine (hydrochloride) (PAG (hydrochloride)) be stored as supplied at -20°C. It should be stable for at least two years.

PAG (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the PAG (hydrochloride) in an organic solvent purged with an inert gas. PAG (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PAG (hydrochloride) in these solvents is approximately 20 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 PAG (hydrochloride) can be prepared by directly dissolving the crystalline compound in the aqueous buffer of choice. The solubility of PAG (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Hydrogen sulphide (H₂S), a naturally occurring gasotransmitter, is a potent vasodilator and pro-inflammatory mediator.¹ DL-Propargylglycine is an irreversible inhibitor of the H₂S synthesizing enzyme cystathionine-γ-lyase (CSE). PAG blocks H_2S synthesis activity in rat liver preparations with an IC_{50} value of 55 μ M and abolishes the rise in plasma H₂S in anaesthetized rats induced with hemorrhagic shock.² At concentrations ranging from 25-100 mg/kg, PAG can reduce H₂S-associated inflammation in rodent models of pancreatitis, oedema, and endotoxemia.³⁻⁵

References

- 1. Li, L. and Moore, P.K. Putative biological roles of hydrogen sulfide in health and disease: A breath of not so fresh air? Trends Pharmacol. Sci. 29(2), 84-90 (2007).
- 2. Mok, Y.-Y.P., Atan, M.S.B.M., Ping, C.Y., et al. Role of hydrogen sulphide in haemorrhagic shock in the rat: Protective effect of inhibitors of hydrogen sulphide biosynthesis. Br. J. Pharmacol. 143, 881-889 (2004).
- 3. Bhatia, M., Sidhapuriwala, J.N., Ng, S.W., et al. Pro-inflammatory effects of hydrogen sulphide on substance P in caerulein-induced acute pancreatitis. J. Cell. Mol. Med. 12(2), 580-590 (2008).
- 4. Bhatia, M., Sidhapuriwala, J., Moochhala, S.M., et al. Hydrogen sulphide is a mediator of carrageenan-induced hindpaw oedema in the rat. Br. J. Pharmacol. 145, 141-144 (2005).
- 5. Collin, M., Anuar, F.B.M., Murch, O., et al. Inhibition of endogenous hydrogen sulfide formation reduces the organ injury caused by endotoxemia. Br. J. Pharmacol. 146, 498-505 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10010948

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road Ann Arbor, MI 48108 USA

Phone (800) 364-9897 (734) 971-3335

Fax (734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.cavmanchem.com