

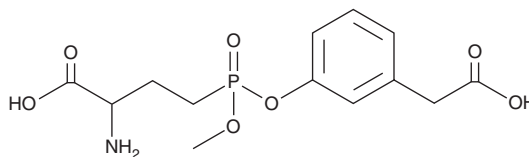
PRODUCT INFORMATION



Nahlsngen

Item No. 43172

CAS Registry No.: 926281-37-0
Formal Name: 3-[[[(3-amino-3-carboxypropyl) methoxyphosphinyl]oxy]-benzeneacetic acid
Synonym: GGSTop
MF: C₁₃H₁₈NO₇P
FW: 331.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Nahlsngen is supplied as a solid. A stock solution may be made by dissolving the nahlsngen in the solvent of choice, which should be purged with an inert gas. Nahlsngen is sparingly soluble (1-10 mg/ml) in DMSO.

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 nahlsngen can be prepared by directly dissolving the solid in aqueous buffers. Nahlsngen is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Nahlsngen is an inhibitor of γ -glutamyl transpeptidase (GGT; $K_i = 170 \mu\text{M}$).¹ It increases left ventricular developed pressure (LVDP), decreases left ventricular end-diastolic pressure (LVEDP), and reduces left ventricle homogenate malondialdehyde (MDA), coronary perfusate norepinephrine, and cardiac oxygen radical levels in perfused isolated rat hearts in a model of ischemia-reperfusion injury when used at a concentration of $1 \mu\text{M}$.² Nahlsngen (5 mg/kg) inhibits IL-13-induced airway constriction in a mouse model of allergic asthma.³ Formulations containing nahlsngen have been used in cosmetics and creams.

References

1. Han, L., Hiratake, J., Kamiyama, A., *et al.* Design, synthesis, and evaluation of γ -phosphono diester analogues of glutamate as highly potent inhibitors and active site probes of γ -glutamyl transpeptidase. *Biochemistry* **46**(5), 1432-1447 (2007).
2. Koyama, T., Tsubota, A., Sawano, T., *et al.* Involvement of γ -glutamyl transpeptidase in ischemia/reperfusion-induced cardiac dysfunction in isolated rat hearts. *Biol. Pharm. Bull.* **42**(11), 1947-1952 (2019).
3. Tuzova, M., Jean, J.-C., Hughey, R.P., *et al.* Inhibiting lung lining fluid glutathione metabolism with GGSTop as a novel treatment for asthma. *Front. Pharmacol.* **5**, 179 (2014).

WARNING

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

SAFETY 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.

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