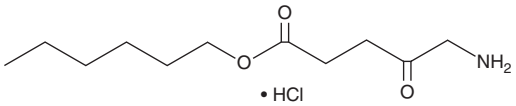
PRODUCT INFORMATION

Hexaminolevulinate (hydrochloride)

Item No. 23949

CAS Registry No.:	140898-91-5
Formal Name:	5-amino-4-oxo-pentanoic acid, hexyl ester, monohydrochloride
Synonyms:	5-Aminolevulinic Acid hexyl ester, Hexyl 5-aminolevulinate
MF:	$C_{11}H_{21}NO_3 \bullet HCl$
FW:	251.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 270 nm
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

Hexaminolevulinate (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the hexaminolevulinate (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Hexaminolevulinate (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. It is also soluble in water. The solubility of hexaminolevulinate (hydrochloride) in these solvents is approximately 30 mg/ml. The solubility of hexaminolevulinate (hydrochloride) in water is approximately 50 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 hexaminolevulinate (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of hexaminolevulinate (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

Hexaminolevulinate is a lipophilic, hexyl ester prodrug form of 5-aminolevulinic acid (Item No. 9001902).[1] It produces equivalent protoporphyrin IX (PpIX) induction in WiDr and NHIK 3025 carcinoma cells at concentrations approximately 100-fold lower than 5-aminolevulinic acid. *In vivo*, hexaminolevulinate penetrates upper skin layers more effectively in pigs and induces higher levels of PpIX fluorescence in nude mice when compared with 5-aminolevulinic acid following topical administration.[2] Formulations containing hexaminolevulinate have been used in imaging and photodynamic therapy for a variety of urogenital cancers.

References

1. Gaullier, J.-M., Berg, K., Peng, Q., *et al.* Use of 5-aminolevulinic acid esters to improve photodynamic therapy on cells in culture. *Cancer Res.* **57(8)**, 1481-1486 (1997).
2. Morrow, D.I.J., McCarron, P.A., Woolfson, A.D., *et al.* Hexyl aminolaevulinate is a more effective topical photosensitiser precursor than methyl aminolaevulinate and 5-aminolaevulinic acids when applied in equimolar doses. *J. Pharm. Sci.* **99(8)**, 3486-3498 (2010).

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