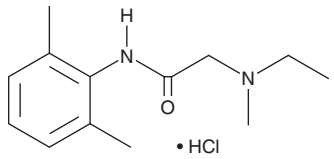
PRODUCT INFORMATION

N-(2,6-Dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride)

Item No. 18463

CAS Registry No.: 50295-20-0
Formal Name: N-(2,6-dimethylphenyl)-2-(ethylmethylamino)-acetamide, monohydrochloride
Synonyms: Lidocaine Impurity K, RAD240
MF: $C_{13}H_{20}N_2O \bullet HCl$
FW: 256.8
Purity: ≥98%
Supplied as: A crystalline 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

N-(2,6-Dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the N-(2,6-dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride) in the solvent of choice, which should be purged with an inert gas. N-(2,6-Dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N-(2,6-dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride) in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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 N-(2,6-dimethylphenyl)-2-(ethylmethylamino)acetamide (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N-(2,6-dimethylphenyl)-2-(ethylmethylamino)acetamide (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

Lidocaine is an anesthetic that blocks voltage-gated Na^+ channels (IC_{50} = 128 µM) with selectivity over L-type Ca^{2+} channels and $GABA_A$ receptors.[1] Lidocaine can also have pronociceptive effects by activating the transient receptor potential (TRP) channel TRPA1.[2] N-(2,6-Dimethylphenyl)-2-(ethylmethylamino) acetamide is a lidocaine impurity.[3,4]

References

1. Lingamaneni, R. and Hemmings, H.C., Jr. *Br. J. Anaesth.* **90(2)**, 199-211 (2003).
2. Baraldi, P.G., Preti, D., Materazzi, S., *et al. J. Med. Chem.* **53(14)**, 5085-5107 (2010).
3. Hommerson, P., Khan, A.M., Bristow, T., *et al. Rapid Commun. Mass Spectrom.* **23(18)**, 2878-2884 (2009).
4. Prathyusha, P., Shanmugasundaram, P., and Naidu, P.Y. *IJAPA* **3(1)**, 1-10 (2013).

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