

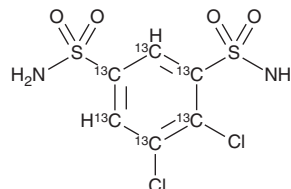
PRODUCT INFORMATION



Dichlorphenamide-¹³C₆

Item No. 30719

CAS Registry No.: 1391054-76-4
Formal Name: 4,5-dichlorobenzene-1,3-disulfonamide-
1,2,3,4,5,6-¹³C₆
Synonym: Diclofenamide-¹³C₆
MF: [¹³C]₆H₆Cl₂N₂O₄S₂
FW: 311.1
Chemical Purity: ≥98% (Dichlorphenamide)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
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

Dichlorphenamide-¹³C₆ is intended for use as an internal standard for the quantification of dichlorphenamide (Item No. 23658) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Dichlorphenamide-¹³C₆ is supplied as a solid. A stock solution may be made by dissolving the dichlorphenamide-¹³C₆ in the solvent of choice, which should be purged with an inert gas. Dichlorphenamide-¹³C₆ is slightly soluble in chloroform and DMSO.

Description

Dichlorphenamide is a sulfonamide and an orally bioavailable carbonic anhydrase (CA) inhibitor (K_s = 1.20, 38, 50, and 50 nM for the human CA isoforms CAI, CAII, CAIX, and CAXII, respectively).¹ It lowers intraocular pressure in rabbits when 50 μl of a 10% solution is applied topically to the eye.² Dichlorphenamide rescues the potassium deficiency and prevents insulin-induced paralysis in a rat model of familial hypokalemic periodic paralysis when administered at a dose of 5.6 mg/kg per day for ten days.³ Formulations containing dichlorphenamide have been used in the treatment of glaucoma and primary periodic paralysis.

References

1. Brzozowski, Z., Slawiński, J., Innocenti, A., *et al.* Carbonic anhydrase inhibitors. Regioselective synthesis of novel 1-substituted 1,4-dihydro-4-oxo-3-pyridinesulfonamides and their inhibition of the human cytosolic isozymes I and II and transmembrane cancer-associated isozymes IX and XII. *Eur. J. Med. Chem.* **45(9)**, 3656-3661 (2010).
2. Lotti, V.J., Schmitt, C.J., and Gautheron, P.D. Topical ocular hypotensive activity and ocular penetration of dichlorphenamide sodium in rabbits. *Graefes Arch. Clin. Exp. Ophthalmol.* **222(1)**, 13-19 (1984).
3. Tricarico, D., Mele, A., and Conte Camerino, D. Carbonic anhydrase inhibitors ameliorate the symptoms of hypokalaemic periodic paralysis in rats by opening the muscular Ca²⁺-activated-K⁺ channels. *Neuromuscul. Disord.* **16(1)**, 39-45 (2006).

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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