

Product Data Sheet

Product Name: Diclofenac amide

Cat. No.: GC47212

Chemical Properties

Cas. No. 15362-40-0

SMILES C1C=C(N2C(CC3=C2C=CC=C3)=O)C(Cl)=CC=C1

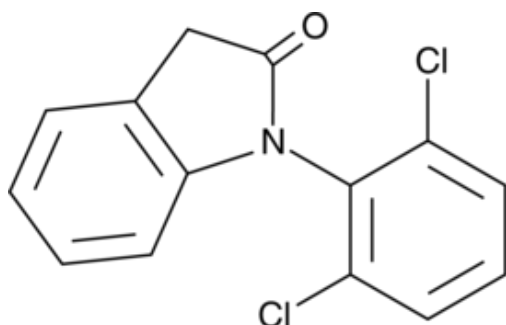
Formula C₁₄H₉Cl₂NO M.Wt 278.1

Solubility DMF: >50mg/mL, DMSO: >40mg/mL, Ethanol: >35mg/mL, PBS (pH 7.2): >9mg/mL
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Diclofenac amide is a prodrug form of the non-steroidal anti-inflammatory drug (NSAID) diclofenac.¹ It decreases paw thickness in a rat model of carrageenan-induced paw edema when administered at a dose of 100 µmol/kg and decreases acetic acid-induced writhing in mice at 100 µmol/kg.² Diclofenac amide has reduced ulcerogenicity in rats compared to diclofenac. It is also a degradation product of diclofenac resulting from photo-transformation or spontaneous cyclization in strongly acidic pH conditions.^{3,4} Diclofenac amide has been used as a synthetic intermediate in the synthesis of compounds with anticancer activity as well as compounds with COX-1, COX-2, and/or 5-lipoxygenase (5-LO) inhibitory activity.^{5,6}

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

1.Santos, J., Moreira, V., Campos, M.L., et al.Pharmacological evaluation and preliminary pharmacokinetics studies of a new diclofenac prodrug without gastric ulceration effectInt. J. Mol. Sci.13(11)15305-15320(2012) 2.Chung, M.C., dos Santos, J.L., Oliveira, E.V., et al.Synthesis, ex vivo and in vitro hydrolysis study of an indoline derivative designed as an anti-inflammatory with reduced gastric ulceration propertiesMolecules14(9)3187-3197(2009) 3.Epold, I., Dulova, N., and Trapido, M.Degradation of diclofenac in aqueous solution by homogeneous and heterogeneous photolysisJ. Environ. Eng. Ecol. Sci.1(3)1-8(2012) 4.Mertz, N., Larsen, S.W., Kristensen, J., et al.Long-acting diclofenac ester prodrugs for joint injection: Kinetics, mechanism of degradation, and in vitro release from prodrug suspensionJ. Pharm. Sci.105(10)3079-3087(2016) 5.Kaur, M., and Singh, P.Targeting tyrosine kinase: Development of acridone - pyrrole - oxindole hybrids against human breast cancerBioorg. Med. Chem. Lett.29(1)32-35(2018) 6.Shaveta, Singh, A., Kaur, M., et al.Rational design, synthesis and evaluation of chromone-indole and chromone-pyrazole based conjugates: Identification of a lead for anti-inflammatory drugEur. J. Med. Chem.77185-192(2014)

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA