

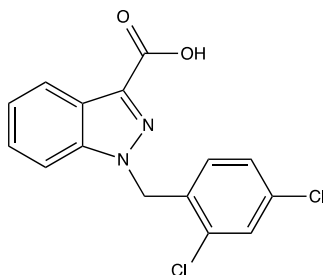
Catalog # 10-4563

Lonidamine

CAS# 50264-69-2

1-[(2,4-Dichlorophenyl)methyl]-1H-indazole-3-carboxylic acid; AF1890; Diclonazolic acid

Lot # FBA2149



Lonidamine was originally investigated as an antispermatogenic agent.¹ Lonidamine has been shown to decrease oxygen consumption as well as aerobic and anaerobic glycolysis in tumor cells leading to apoptosis.² These effects have been attributed to the ability of lonidamine to inhibit mitochondrially bound hexokinase ($IC_{50} = 90 \mu M$ for aerobic glycolysis, $45 \mu M$ for anaerobic glycolysis using Ehrlich ascites tumor cells)². The apoptotic effects of lonidamine have also been attributed to its ability to disrupt the mitochondrial transmembrane potential³ and intracellular acidification by inhibition of lactate efflux⁴.

- 1) Gatto *et al.* (2002), *Recent studies on lonidamine, the lead compound of the antispermatogenic indazol-carboxylic acids*; Contraception **65** 277
- 2) Floridi *et al.*, (1981), *Effect of Lonidamine on the Energy Metabolism of Ehrlich Ascites Tumor Cells*; Cancer Res. **41** 4661
- 3) Ravagnan *et al.* (1999), *Lonidamine triggers apoptosis via a direct, Bcl-2-inhibited effect on the mitochondrial permeability transition pore*; Oncogene **18** 2537
- 4) Ben-Horin *et al.* (1995), *Mechanism of Action of the Antineoplastic Drug Lonidamine: ^{31}P and ^{13}C Nuclear Magnetic Resonance Studies*; Cancer Res. **55** 2814

PHYSICAL DATA

Molecular Weight:	321.16
Molecular Formula:	$C_{15}H_{10}Cl_2N_2O_2$
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (>25 mg/ml).
Physical Description:	White solid
Storage and Stability:	Store as supplied at $-20^{\circ}C$ for up to 1 year from the date of purchase. Store solutions at $-20^{\circ}C$ for up to 1 month.

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