

Product Data Sheet

Product Name: Picolinafen

Cat. No.: GD20476

Chemical Properties

Cas. No. 137641-05-5

Formula $C_{19}H_{12}F_4N_2O_2$

M.Wt 376.3

Solubility

Storage -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

Picolinafen is a pyridine-class herbicide that acts as a phytoene desaturase (PDS) inhibitor. Picolinafen effectively controls broadleaf weeds and disrupts carotenoid biosynthesis. Picolinafen exhibits cytotoxicity to porcine trophectoderm (pTr) and luminal epithelial (pLE) cells. Picolinafen induces ROS accumulation, calcium depletion, and activates (MAPK and PI3K) signaling pathways, leading to decreased cell viability, increased apoptosis, impaired migration, and altered expression of implantation-related genes. Picolinafen has an LD50 value of 2.7 mg/kg in mammals and 7 µg/L in fish. Picolinafen exhibits toxic effects during zebrafish embryogenesis^{[1][2]}.

References:

[1]. Park W, et al. ROS accumulation and calcium depletion, leading to apoptosis in porcine embryonic trophectoderm and uterine luminal epithelial cells during the peri-implantation period. Theriogenology. 2023 Apr 15;201:12-23.

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