

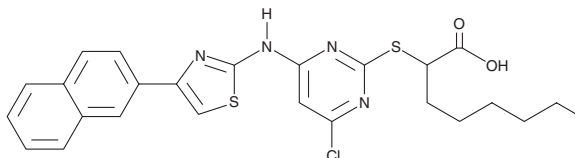
PRODUCT INFORMATION



Pirinixic Acid Aminothiazole

Item No. 15483

CAS Registry No.: 1492060-44-2
Formal Name: 2-[[4-chloro-6-[[4-(2-naphthalenyl)-2-thiazolyl]amino]-2-pyrimidinyl]thio]-octanoic acid
MF: C₂₅H₂₅ClN₄O₂S₂
FW: 513.1
Purity: ≥98%
UV/Vis.: λ_{max}: 208, 256, 308 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pirinixic acid aminothiazole is supplied as a crystalline solid. A stock solution may be made by dissolving the pirinixic acid aminothiazole in the solvent of choice. Pirinixic acid aminothiazole is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of pirinixic acid aminothiazole in these solvents is approximately 20 and 25 mg/ml, respectively.

Pirinixic acid aminothiazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pirinixic acid aminothiazole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Pirinixic acid aminothiazole has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Microsomal prostaglandin E₂ synthase-1 (mPGES-1) and 5-lipoxygenase (5-LO) are key enzymes in the synthesis of PGE₂ (Item No. 14010) and leukotrienes (LTs), respectively. PGE₂ and LTs are bioactive lipids that contribute to a broad range of pathologies, including inflammation and various forms of cancer.^{1,2} Pirinixic acid aminothiazole is a dual inhibitor of mPGES-1 and 5-LO (IC₅₀s = 0.4 and 0.2 μM, respectively).³ It is a weak inhibitor of COX-1 and -2 and has no effect on 12- and 15-LO isoforms.³ Pirinixic acid aminothiazole reduces the synthesis of PGE₂ and LTC₄ (Item No. 20210) during zymosan-induced peritonitis in mice, resulting in a significantly diminished inflammatory response.³

References

1. Funk, C.D. Prostaglandins and leukotrienes: Advances in eicosanoid biology. *Science* **294**, 1871-1875 (2001).
2. Samuelsson, B., Morgenstern, R., and Jakobsson, P.-J. Membrane prostaglandin E synthase -1: A novel therapeutic target. *Pharmacol. Rev.* **59**(3), 207-224 (2007).
3. Hanke, T., Dehm, F., Liening, S., et al. Aminothiazole-featured pirinixic acid derivatives as dual 5-lipoxygenase and microsomal prostaglandin E₂ synthase-1 inhibitors with improved potency and efficiency *in vivo*. *J. Med. Chem.* **56**(22), 9031-9044 (2013).

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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