

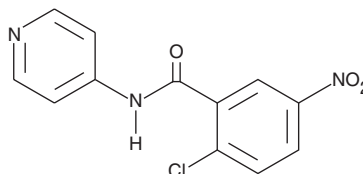
Product Information



T0070907

Catalog No. 10026

CAS Registry No.: 313516-66-4
Formal Name: 2-chloro-5-nitro-N-(4-pyridinyl)-benzamide
MF: C₁₂H₈ClN₃O₃
FW: 277.7
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 257 nm



Laboratory Procedures

For long term storage, we suggest that T0070907 be stored as supplied at -20°C. It should be stable for at least one year.

T0070907 is supplied as a crystalline solid. A stock solution may be made by dissolving the T0070907 in an organic solvent purged with an inert gas. T0070907 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of T0070907 in these solvents is approximately 10 mg/ml.

T0070907 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, T0070907 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. T0070907 has a solubility of 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The peroxisome proliferator-activated receptor- γ (PPAR γ) is the nuclear receptor responsible for transducing the therapeutic activity of the thiazolidinediones (TZDs). TZDs are a group of structurally related synthetic PPAR γ agonists with antidiabetic actions *in vivo*.^{1,2}

There are many PPAR γ agonists, including 15-deoxy- $\Delta^{12,14}$ -prostaglandin J₂ and Azelaoyl PAF, which are naturally derived.^{3,4} However, only a few antagonists have been reported.⁵ T0070907 is a potent and selective antagonist of the human PPAR γ receptor with an apparent IC₅₀ of 1 nM for the binding inhibition of rosiglitazone, a reference TZD. T0070907 covalently binds to Cys313 of PPAR γ , inducing conformational changes that block the recruitment of transcriptional cofactors to the PPAR γ /RXR heterodimer.⁶

References

- Willson, T.M., Cobb, J.E., Cowan, D.J., *et al.* The structure-activity relationship between peroxisome proliferator-activated receptor γ agonism and the antihyperglycemic activity of thiazolidinediones. *J. Med. Chem.* **39**, 665-668 (1996).
- Cantello, B.C.C., Cawthorne, M.A., Cottam, G.P., *et al.* [[ω -(Heterocyclamino)alkoxy]benzyl]-2,4-thiazolidinediones as potent antihyperglycemic agents. *J. Med. Chem.* **37**, 3977-3985 (1994).
- Davies, S.S., Pontsler, A.V., Marathe, G.K., *et al.* Oxidized alkyl phospholipids are specific, high affinity peroxisome proliferator-activated receptor γ ligands and agonists. *J. Biol. Chem.* **276**, 16015-16023 (2001).
- Maxey, K.M., Hessler, E., MacDonald, J., *et al.* The nature and composition of 15-deoxy- $\Delta^{12,14}$ -PGJ₂. *Prostaglandins and Other Lipid Mediators* **62**, 15-21 (2000).
- Wright, H.M., Clish, C.B., Mikami, T., *et al.* A synthetic antagonist for the peroxisome proliferator-activated receptor γ inhibits adipocyte differentiation. *J. Biol. Chem.* **275**, 1873-1877 (2000).
- Lee, G., Elwood, F., McNally, J., *et al.* T0070907, a selective ligand for peroxisome proliferator-activated receptor γ , functions as an antagonist of biochemical and cellular activities. *J. Biol. Chem.* **277**(22), 19649-19657 (2002).

Related Products

15-deoxy- $\Delta^{12,14}$ -Prostaglandin J₂ - Cat. No. 18570 • 15-deoxy- $\Delta^{12,14}$ -Prostaglandin J₂ - Cat. No. 18570.1 • Azelaoyl PAF - Cat. No. 60924 • GW 9662 - Cat. No. 70785 • BADGE - Cat. No. 70790 • PPAR γ -PAK - Cat. No. 71000 • Ciglitazone - Cat. No. 71730 • Rosiglitazone - Cat. No. 71740 • Rosiglitazone (potassium salt) - Cat. No. 71742 • Troglitazone - Cat. No. 71750

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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