

**Product Name:** Pioglitazone hydrochloride

**Catalog No.:** 4124

**Batch No.:** 1

CAS Number: 112529-15-4

IUPAC Name: 5-[[4-[2-(5-Ethyl-2-pyridinyl)-ethoxy]phenyl]methyl]-2,4-thiazolidinedione hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>S.HCl

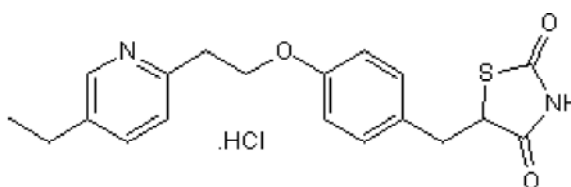
**Batch Molecular Weight:** 392.9

**Physical Appearance:** White solid

**Solubility:** DMSO to 25 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**Melting Point:** Between 190 - 192°C

**HPLC:** Shows 100% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.08	5.39	7.13
Found	58.14	5.43	7.24

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**Description:**

Selective PPAR $\gamma$  agonist (EC<sub>50</sub> = 0.69  $\mu$ M). Thiazolidinedione (TZD) derivative and antidiabetic agent; improves insulin sensitivity. Also enhances proliferation and survival of mESCs and acts synergistically with Y-27632 (Cat.No. 1254) to improve survival of dissociated single hPSCs and increase colony formation.

**Physical and Chemical Properties:**

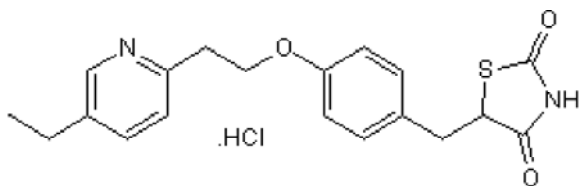
Batch Molecular Formula: C<sub>19</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>S.HCl

Batch Molecular Weight: 392.9

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

DMSO to 25 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Kajabadi *et al*** (2015) The synergistic enhancement of cloning efficiency in individualized human pluripotent stem cells by peroxisome proliferative-activated receptor- $\gamma$  (PPAR $\gamma$ ) activation and Rho-associated kinase (ROCK) inhibition. *J.Biol.Chem.* **290** 26303. PMID: 26336103.

**Momose *et al*** (2002) Novel 5-substituted 2,4-thiazolidinedione and 2,4-oxazolidinedione derivatives as Ins sensitizers with antidiabetic activities. *J.Med.Chem.* **45** 1518. PMID: 11906293.

**Sakamoto *et al*** (2000) Activation of human peroxisome proliferator-activated receptor (PPAR) subtypes by pioglit. *Biochem.Biophys.Res.Commun.* **278** 704. PMID: 11095972.

**Willson *et al*** (1996) The structure-activity relationship between peroxisome proliferator-activated receptor  $\gamma$  agonism and the antihyperglycemic activity of thiazolidinediones. *J.Med.Chem.* **39** 665. PMID: 8576907.

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