Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Pioglitazone (hydrochloride)

Catalog No: tcsc2235

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
112529-15-4

Formula:
$C_{19}H_{21}ClN_2O_3S$

Pathway:
Cell Cycle/DNA Damage

Target:
PPAR

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 33.3 mg/mL (84.75 mM)

Alternative Names:
U 72107A;AD 4833

Observed Molecular Weight:
392.9

Product Description

Pioglitazone hydrochloride is a potent and selective **PPARγ** agonist with high affinity binding to the PPARγ ligand-binding domain with $\mathbf{EC_{50}}$ of 0.93 and 0.99 μM for human and mouse PPARγ, respectively.

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IC50 & Target: EC50: 0.93 μM (human PPARγ), 0.99 μM (mouse PPARγ)[1]

In Vitro: AGEs-induced beta cell necrosis is completely abrogated by adding Pioglitazone to the AGEs culture medium. Furthermore Pioglitazone completely prevented any AGEs-induced increment in caspase-3 activation, thereby restoring caspase-3 activity to the same levels as the control cells. As expected AG is able to counteract AGEs-induced impaired viability[2].

In Vivo: The serum-free fatty acid and triglyceride levels as well as adipocyte sizes in ob/ob and *adipo*$^{-/-}$ ob/ob mice are unchanged after 10 mg/kg Pioglitazone but are significantly reduced to a similar degree after 30 mg/kg Pioglitazone. Moreover, the expressions of TNFα and resistin in adipose tissues of ob/ob and *adipo*$^{-/-}$ ob/ob mice are unchanged after 10 mg/kg Pioglitazone but are decreased after 30 mg/kg Pioglitazone. Thus, Pioglitazone-induced amelioration of insulin resistance and diabetes may occur adiponectin dependently in the liver and adiponectin independently in skeletal muscle[3]. Pioglitazone (10 mg/kg per d) treatment significantly attenuates the loss of body weight (BW) and cardiac hypertrophy. Pioglitazone treatment significantly reduces the elevated serum glucose levels and markedly improved the associated dyslipidemia. Furthermore, there is a slight but significant increase in serum creatinine level in D rats over their N controls (P [4].