Web: www.taiclone.com
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# Rosiglitazone

## Catalog No: tcsc1088

### Available Sizes

**Size:** 50mg

**Size:** 200mg

### Specifications

**CAS No:**
122320-73-4

**Formula:**
$C_{18}H_{19}N_3O_3S$

**Pathway:**
Cell Cycle/DNA Damage;Membrane Transporter/Ion Channel;Autophagy

**Target:**
PPAR;TRP Channel;Autophagy

**Form:**
White to off-white (Solid)

**Purity / Grade:**
99.48%

**Solubility:**
DMSO : ≥ 110 mg/mL (307.75 mM)
H2O :

**Storage Instruction:**
Powder -20°C for 3 years; 4°C for 2 years In solvent -80°C for 6 months; -20°C for 1 month

**Alternative Names:**
BRL49653;2,4-Thiazolidinedione, 5-[[4-[2-(methyl-2-pyridinylamino)ethoxy]phenyl]methyl]-

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**Observed Molecular Weight:**
357.43

## Product Description

Rosiglitazone (BRL49653) is a potent thiazolidinedione insulin sensitizer. Rosiglitazone is a selective **PPARγ** agonist with **$EC_{50}$**s of 30 nM, 100 nM and 60 nM for **PPARγ1**, **PPARγ2**, and **PPARγ**, respectively.

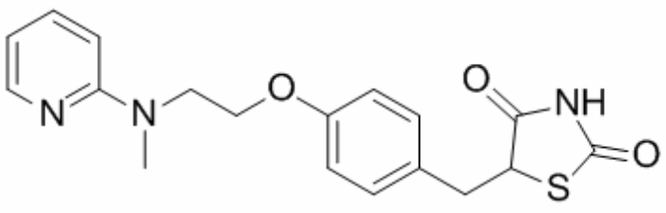
IC50 & Target: EC50: 30 nM (PPARγ1), 100 nM (PPARγ2)[1], 60 nM (PPARγ)[2], appr 30 nM (TRPC5)[4]

Kd: appr 40 nM (PPARγ)[1]

IC50: appr 22.5 μM (TRPM2)[4]

***In Vitro:*** Rosiglitazone is a potent and selective activator of PPARγ, with $EC_{50}$s of 30 nM and 100 nM for PPARγ1 and PPARγ2, respectively, and a $K_d$ of appr 40 nM for PPARγ. Rosiglitazone (BRL49653, 0.1, 1,10 μM) promotes differentiation of C3H10T1/2 stem cells to adipocytes[1]. Rosiglitazone (Compound 6) activates PPARγ, with an $EC_{50}$ of 60 nM[2]. Rosiglitazone (1 μM) activates PPARγ, which binds to NF-α1 promoter to activate gene transcription in neurons. Rosiglitazone (1 μM) also protects Neuro2A cells and hippocampal neurons against oxidative stress, and up-regulates BCL-2 expression in an NF-α1-dependent manner[3]. Rosiglitazone completely inhibits TRPM3 with $IC_{50}$ values of 9.5 and 4.6 μM against nifedipine- and PregS-evoked activity, but such effects are not via PPARγ. Rosiglitazone inhibits TRPM2 at higher concentration, with an $IC_{50}$ of appr 22.5 μM. Rosiglitazone is a strong stimulator of TRPC5 channels, with an $EC_{50}$ of ~30 μM[4].

***In Vivo:*** Rosiglitazone (5 mg/kg, p.o.) decreases the serum glucose in diabetic rats. Rosiglitazone also decreases IL-6, TNF-α, and VCAM-1 levels in diabetic group. Rosiglitazone in combination with losartan increases glucose compared to diabetic and Los-treated groups. Rosiglitazone significantly ameliorates endothelial dysfunction indicated by a significantly lower contractile response to PE and Ang II and enhancement of ACh-provoked relaxation in aortas isolated from diabetic rats[5].




## Protocol

| Preparing Stock Solution | Volume / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1mM | 2.7978 mL | 13.9888 mL | 27.9775 mL |
| | 5mM | 0.5596 mL | 2.7978 mL | 5.5955 mL |
| | 10mM | 0.2798 mL | 1.3989 mL | 2.7978 mL |