



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

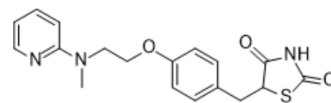
www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic)



Rosiglitazone

Cat. No.:	HY-17386
CAS No.:	122320-73-4
Molecular Formula:	C ₁₈ H ₁₉ N ₃ O ₃ S
Molecular Weight:	357.43
Target:	PPAR; TRP Channel; Autophagy; Ferroptosis; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor; Membrane Transporter/Ion Channel; Neuronal Signaling; Autophagy; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (699.44 mM; Need ultrasonic)
 Ethanol : 2 mg/mL (5.60 mM; ultrasonic and warming and heat to 60°C)
 H₂O : < 0.1 mg/mL (ultrasonic) (insoluble)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.7978 mL	13.9888 mL	27.9775 mL
	5 mM		0.5596 mL	2.7978 mL	5.5955 mL
	10 mM		0.2798 mL	1.3989 mL	2.7978 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 0.5% CMC-Na/saline water
Solubility: 10 mg/mL (27.98 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: 2.5 mg/mL (6.99 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: ≥ 2.5 mg/mL (6.99 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.99 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (5.82 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (5.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Rosiglitazone (BRL 49653) is an orally active selective PPAR γ agonist (EC ₅₀ : 60 nM, K _d : 40 nM). Rosiglitazone is an TRPC5 activator (EC ₅₀ : 30 μ M) and TRPM3 inhibitor. Rosiglitazone can be used in the research of obesity and diabetes, senescence, ovarian cancer ^{[1][2][4][7]} .																			
IC ₅₀ & Target	PPAR γ 40 nM (Kd)	PPAR γ 60 nM (EC50)	TRPC5 30 μ M (EC50)	TRPM3																
In Vitro	Rosiglitazone (0.1-10 μM, 72 h) results in pluripotent C3H10T1/2 stem cell differentiation to adipocytes^[1]. Rosiglitazone (1 μM, 24 h) activates PPARγ, which binds to NF-α1 promoter to activate gene transcription in neurons^[3]. Rosiglitazone (1 μM, 24 h) protects Neuro2A cells and hippocampal neurons against oxidative stress, and up-regulates BCL-2 expression in an NF-α1-dependent manner^[3]. Rosiglitazone (0.01-100 μM, 15 min) inhibits TRPM3 with IC₅₀ values of 9.5 and 4.6 μM against nifedipine- and PregS-evoked activity respectively^[4]. Rosiglitazone (0.5-50 μM, 7 days) inhibits ovarian cancer cell proliferation^[7]. Rosiglitazone (5 μM, 7 days) suppresses Olaparib (HY-10162) induced alterations of cellular senescence and promotes apoptosis in A2780 and SKOV3 cells^[7]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Proliferation Assay^[7] <table><tr><td>Cell Line:</td><td>A2780 and SKOV3 cells</td></tr><tr><td>Concentration:</td><td>0.5-50 μM</td></tr><tr><td>Incubation Time:</td><td>1-7 days</td></tr><tr><td>Result:</td><td>Inhibited cell proliferation in a time$\times$dependent and concentration$\times$dependent manner.</td></tr></table> Western Blot Analysis^[3] <table><tr><td>Cell Line:</td><td>Hippocampal neurons</td></tr><tr><td>Concentration:</td><td>1 μM</td></tr><tr><td>Incubation Time:</td><td>24 h</td></tr><tr><td>Result:</td><td>Increased NF-α1 and BCL-2 protein level.</td></tr></table>				Cell Line:	A2780 and SKOV3 cells	Concentration:	0.5-50 μ M	Incubation Time:	1-7 days	Result:	Inhibited cell proliferation in a time $\times$ dependent and concentration $\times$ dependent manner.	Cell Line:	Hippocampal neurons	Concentration:	1 μ M	Incubation Time:	24 h	Result:	Increased NF- α 1 and BCL-2 protein level.
Cell Line:	A2780 and SKOV3 cells																			
Concentration:	0.5-50 μ M																			
Incubation Time:	1-7 days																			
Result:	Inhibited cell proliferation in a time $\times$ dependent and concentration $\times$ dependent manner.																			
Cell Line:	Hippocampal neurons																			
Concentration:	1 μ M																			
Incubation Time:	24 h																			
Result:	Increased NF- α 1 and BCL-2 protein level.																			
In Vivo	Rosiglitazone (oral administration, 5 mg/kg, daily for 8 weeks) decreases the serum glucose in diabetic rats^[5]. Rosiglitazone (intraperitoneal injection, 3 mg/kg/day) ameliorates airway inflammation induced by cigarette smoke via inhibiting the M1 macrophage polarization by activating PPARγ and RXRα in male Wistar rats^[6]. Rosiglitazone (intraperitoneal injection, 10 mg/kg, once every 2 days) inhibits subcutaneous ovarian cancer growth in A2780 and SKOV3 mouse subcutaneous xenograft models^[7]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. <table><tr><td>Animal Model:</td><td>Streptozotocin (STZ)-induced diabetic rats^[5]</td></tr><tr><td>Dosage:</td><td>5 mg/kg</td></tr><tr><td>Administration:</td><td>Oral administration, daily for 8 weeks.</td></tr><tr><td>Result:</td><td>Decreased IL-6, TNF-α, and VCAM-1 levels in diabetic group. Displayed lower levels of lipid peroxidation and NOx with an increase in aortic GSH and SOD levels compared to diabetic groups.</td></tr></table>				Animal Model:	Streptozotocin (STZ)-induced diabetic rats ^[5]	Dosage:	5 mg/kg	Administration:	Oral administration, daily for 8 weeks.	Result:	Decreased IL-6, TNF- α , and VCAM-1 levels in diabetic group. Displayed lower levels of lipid peroxidation and NOx with an increase in aortic GSH and SOD levels compared to diabetic groups.								
Animal Model:	Streptozotocin (STZ)-induced diabetic rats ^[5]																			
Dosage:	5 mg/kg																			
Administration:	Oral administration, daily for 8 weeks.																			
Result:	Decreased IL-6, TNF- α , and VCAM-1 levels in diabetic group. Displayed lower levels of lipid peroxidation and NOx with an increase in aortic GSH and SOD levels compared to diabetic groups.																			

Animal Model:	Male Wistar rats ^[6]
Dosage:	3 mg/kg/day
Administration:	Intraperitoneal injection, twice a day, 6 days per week for 12 consecutive weeks
Result:	Ameliorated emphysema, elevated PEF, and higher level of total cells, neutrophils and cytokines (TNF- α and IL-1 β) induced by cigarette smoke (CS). Inhibited CS-induced M1 macrophage polarization and decreased the ratio of M1/M2.

CUSTOMER VALIDATION

- Circulation. 2022 Nov 30.
- Cell Metab. 2023 Dec 5;35(12):2165-2182.e7.
- Cell Metab. 2023 Sep 7;S1550-4131(23)00304-2.
- Cell Metab. 2021 Mar 2;33(3):581-597.e9.
- Nat Commun. 2023 Jun 2;14(1):3208.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Haoshen Feng, et al. Rosiglitazone ameliorated airway inflammation induced by cigarette smoke via inhibiting the M1 macrophage polarization by activating PPAR γ and RXR α . Int Immunopharmacol. 2021 Aug;97:107809.
- [2]. Zehua Wang, et al. Rosiglitazone ameliorates senescence and promotes apoptosis in ovarian cancer induced by olaparib. Cancer Chemother Pharmacol. 2020 Feb;85(2):273-284.
- [3]. Lehmann JM, et al. An antidiabetic thiazolidinedione is a high affinity ligand for peroxisome proliferator-activated receptor gamma (PPAR gamma). J Biol Chem. 1995 Jun 2;270(22):12953-6.
- [4]. Willson TM, et al. The structure-activity relationship between peroxisome proliferator-activated receptor gamma agonism and the antihyperglycemic activity of thiazolidinediones. J Med Chem. 1996 Feb 2;39(3):665-8.
- [5]. Thouenon E, et al. Rosiglitazone-activated PPAR γ induces neurotrophic factor- α 1 transcription contributing to neuroprotection. J Neurochem. 2015 Aug;134(3):463-70.
- [6]. Majeed Y, et al. Rapid and contrasting effects of rosiglitazone on transient receptor potential TRPM3 and TRPC5 channels. Mol Pharmacol. 2011 Jun;79(6):1023-30.
- [7]. Ateyya H, et al. Beneficial effects of rosiglitazone and losartan combination in diabetic rats. Can J Physiol Pharmacol. 2018 Mar;96(3):215-220.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA