

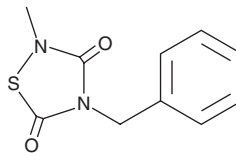
PRODUCT INFORMATION



TDZD-8

Item No. 16287

CAS Registry No.: 327036-89-5
Formal Name: 2-methyl-4-(phenylmethyl)-1,2,4-thiadiazolidine-3,5-dione
Synonyms: GSK3 β Inhibitor I, NP 01139
MF: C₁₀H₁₀N₂O₂S
FW: 222.3
Purity: \geq 98%
UV/Vis.: λ_{max} : 238 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TDZD-8 is supplied as a crystalline solid. A stock solution may be made by dissolving the TDZD-8 in the solvent of choice, which should be purged with an inert gas. TDZD-8 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TDZD-8 in these solvents is approximately 20 mg/ml.

Description

TDZD-8 is a thiadiazolidine derivative that acts as a non-ATP competitive inhibitor of the serine/threonine kinase glycogen synthase kinase 3 β (GSK3 β ; IC₅₀ = 2 μ M), binding to the active site of GSK3 β .¹ It does not significantly affect the activities of Cdk-1/cyclin B, CK-II, cAMP-dependent protein kinase, or protein kinase C (IC₅₀s = >100 μ M).¹ TDZD-8 has been used to study the role of GSK3 β during stem cell differentiation as well as in cell and animal models of Alzheimer's disease and other neurodegenerative disorders.^{2,3}

References

1. Martinez, A., Alonso, M., Castro, A., *et al.* First non-ATP competitive glycogen synthase kinase 3 β (GSK-3 β) inhibitors: Thiadiazolidinones (TDZD) as potential drugs for the treatment of Alzheimer's disease. *J. Med. Chem.* **45(6)**, 1292-1299 (2002).
2. Guzman, M.L., Li, X., Corbett, C.A., *et al.* Rapid and selective death of leukemia stem and progenitor cells induced by the compound 4-benzyl, 2-methyl, 1,2,4-thiadiazolidine, 3,5 dione (TDZD-8). *Blood* **110(13)**, 4436-4444 (2007).
3. Eldar-Finkelman, H. and Martinez, A. GSK-3 inhibitors: Preclinical and clinical focus on CNS. *Front. Mol. Neurosci.* **4**, 32 (2011).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM