

PRODUCT INFORMATION



O-304

Item No. 26186

CAS Registry No.: 1261289-04-6

Formal Name: 4-chloro-N-[2-[(4-chlorophenyl)methyl]-2,3-dihydro-3-oxo-1,2,4-thiadiazol-5-yl]-benzamide

MF: C₁₆H₁₁Cl₂N₃O₂S

FW: 380.2

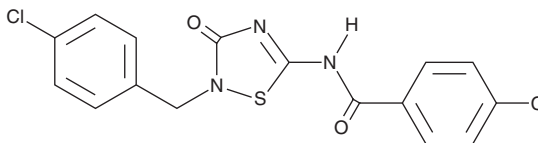
Purity: ≥98%

UV/Vis.: λ_{max}: 256, 320 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

O-304 is supplied as a crystalline solid. A stock solution may be made by dissolving the O-304 in the solvent of choice, which should be purged with an inert gas. O-304 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of O-304 in these solvents is approximately 10 mg/ml. O-304 is slightly soluble in ethanol.

O-304 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, O-304 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. O-304 has a solubility of approximately 0.03 mg/ml in a 1:30 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

O-304 is a pan-activator of AMP-activated protein kinase (AMPK).¹ It increases levels of phosphorylated AMPK (pAMPK) without reducing cellular ATP. O-304 suppresses dephosphorylation of AMPKα, AMPKβ, and AMPKγ trimers at threonine 172 (T172) mediated by protein phosphatase 2C (PP2C) without inhibiting PP2C activity in Wi-38 lung fibroblasts. *In vivo*, O-304 (100 mg/kg) prevents high-fat diet-induced increases in fasted glucose and plasma insulin levels and development of insulin resistance, as well as increases calf muscle pAMPK levels in mice.

Reference

1. Steneberg, P., Lindahl, E., Dahl, U., *et al.* PAN-AMPK activator O304 improves glucose homeostasis and microvascular perfusion in mice and type 2 diabetes patients. *JCI Insight* **3**(12), 99114 (2018).

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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