

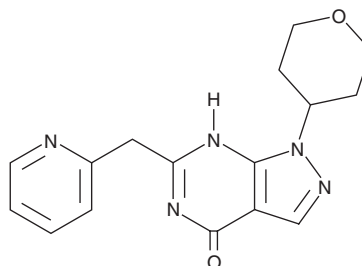
PRODUCT INFORMATION



BI-409306

Item No. 30375

CAS Registry No.: 1189767-28-9
Formal Name: 1,5-dihydro-6-(2-pyridinylmethyl)-1-(tetrahydro-2H-pyran-4-yl)-4H-pyrazolo[3,4-d]pyrimidin-4-one
MF: C₁₆H₁₇N₅O₂
FW: 311.3
Purity: ≥98%
UV/Vis.: λ_{max}: 256 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

BI-409306 is supplied as a crystalline solid. A stock solution may be made by dissolving the BI-409306 in the solvent of choice, which should be purged with an inert gas. BI-409306 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of BI-409306 in these solvents is approximately 5 and 10 mg/ml, respectively.

BI-409306 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BI-409306 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. BI-409306 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BI-409306 is a potent and selective phosphodiesterase 9A (PDE9A) inhibitor with IC₅₀ values of 65 and 168 nM for the human and rat enzymes, respectively.¹ It is selective for PDE9A over PDE2A, -3A, -4B, -5A, -6AB, -7A and -10A and 95 non-PDE targets at 10 μM but does inhibit human PDE1A and PDE1C (IC₅₀s = 1.45 and 1.17 μM, respectively). BI-409306 (0.5 mg/kg), in combination with MK-801, an NMDA receptor antagonist that reduces cGMP levels, increases cGMP levels by 41% in mouse striatal tissue compared with MK-801 alone. BI 406306 enhances long-term potentiation (LTP) in hippocampal slices and reverses MK-801-induced working memory deficits in a T-maze task in mice when administered at doses ranging from 0.007 to 2.5 mg/kg.

Reference

1. Rosenbrock, H., Giovannini, R., Schanzle, G., *et al.* The novel phosphodiesterase 9A inhibitor BI 409306 increases cyclic guanosine monophosphate levels in the brain, promotes synaptic plasticity, and enhances memory function in rodents. *J. Pharmacol. Exp. Ther.* **371**(3), 633-641 (2019).

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.

WARRANTY AND LIMITATION OF REMEDY

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