

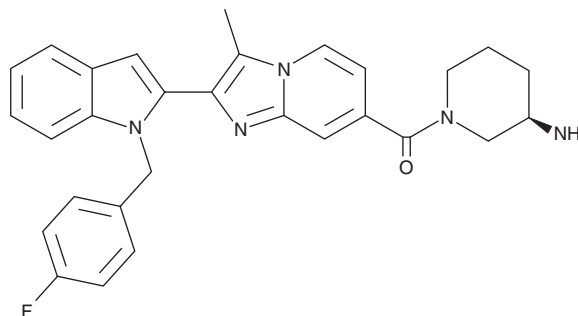
PRODUCT INFORMATION



JB1-589

Item No. 42126

CAS Registry No.: 2308504-22-3
Formal Name: [(3R)-3-amino-1-piperidinyl]
[2-[1-[(4-fluorophenyl)methyl]-1H-indol-2-yl]-3-
methylimidazo[1,2-a]pyridin-7-yl]-methanone
MF: C₂₉H₂₈FN₅O
FW: 481.6
Purity: ≥98%
Supplied as: A 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

JB1-589 is supplied as a solid. A stock solution may be made by dissolving the JB1-589 in the solvent of choice, which should be purged with an inert gas. JB1-589 is slightly soluble (0.1-1 mg/ml) in acetonitrile and DMSO.

Description

JB1-589 is an inhibitor of peptidyl arginine deiminase 4 (PAD4; IC₅₀ = 0.122 μM).¹ It is selective for PAD4 over PAD1, PAD2, PAD3, and PAD6 at 30 μM. JB1-589 (10 μM) inhibits calcium-induced increases in histone 3 citrullination (H3Cit) and neutrophil extracellular trap (NET) formation in isolated human neutrophils. It decreases serum IL-6 and plasma H3Cit levels and ankle joint inflammation and erosion levels in a mouse model of GM-CSF- and collagen-induced arthritis when administered at a dose of 20 mg/kg twice per day. JB1-589 reduces tumor size and tumor-associated neutrophil levels and increases tumor Cd8⁺ T cell and Cd4⁺ T cell levels but also decreases splenic macrophage, Cd4⁺ T cell, and regulatory T cell (Treg) levels in an LL/2 murine lung cancer model.²

References

1. Gajendran, C., Fukui, S., Sadhu, N.M., *et al.* Alleviation of arthritis through prevention of neutrophil extracellular traps by an orally available inhibitor of protein arginine deiminase 4. *Sci. Rep.* **13**(1), 3189 (2023).
2. Deng, H., Lin, C., Garcia-Gerique, L., *et al.* A novel selective inhibitor JB1-589 targets PAD4-mediated neutrophil migration to suppress tumor progression. *Cancer Res.* **82**(19), 3561-3572 (2022).

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