

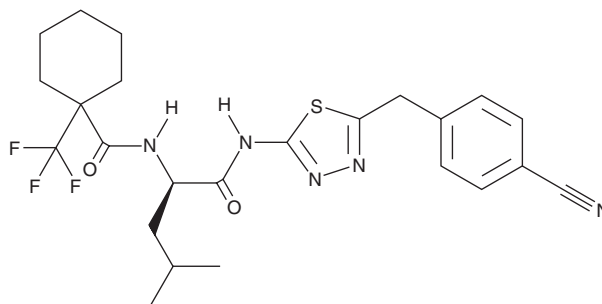
PRODUCT INFORMATION



BAY-805

Item No. 41160

CAS Registry No.: 2925481-88-3
Formal Name: N-[(1R)-1-[[[5-[(4-cyanophenyl)methyl]-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-methylbutyl]-1-(trifluoromethyl)-cyclohexanecarboxamide
MF: C₂₄H₂₈F₃N₅O₂S
FW: 507.6
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

BAY-805 is supplied as a solid. A stock solution may be made by dissolving the BAY-805 in the solvent of choice, which should be purged with an inert gas. BAY-805 is slightly soluble (0.1-1 mg/ml) in acetonitrile and DMSO.

Description

BAY-805 is an inhibitor of ubiquitin-specific protease 21 (USP21; IC₅₀ = 6 nM in a homogenous time-resolved fluorescence (HTRF) assay).¹ It is selective for USP21 over a panel of 44 deubiquitinases (DUBs) and 68 other enzymes, receptors, transporters, and ion channels at 10 μM but does not inhibit acetylcholinesterase (AChE) and adenosine transporters by 72 and 62%, respectively. BAY-805 is also selective for USP21 over a panel of six cysteine proteases (IC₅₀s = >20 μM for all) and a panel of greater than 360 kinases at 10 μM but does not inhibit MAPK-activated protein kinase 5 (MAPKAPK5), also known as p38-regulated/activated protein kinase (PRAK; IC₅₀ = 8.6 μM). It induces activation of NF-κB in a reporter assay using HEK293T cells (EC₅₀ = 17 nM). BAY-805 reduces spheroid formation in HCT-15 and HT-29 colon cancer cells (IC₅₀s = 1.6 and 7.5 μM, respectively).² *In vivo*, BAY-805 (5 and 10 mg/kg) decreases disease severity and spleen, liver, kidney, and lung viral titers in a mouse model of enterovirus 71 (EV71) infection.³

References

- Göricke, F., Vu, V., Smith, L., *et al.* Discovery and characterization of BAY-805, a potent and selective inhibitor of ubiquitin-specific protease USP21. *J. Med. Chem.* **66(5)**, 3431-3447 (2023).
- Shin, J.H., Kim, M.-J., Kim, J.Y., *et al.* USP21-EGFR signaling axis is functionally implicated in metastatic colorectal cancer. *Cell Death Discov.* **10(1)**, 492 (2024).
- Yang, X., Tang, M., Zang, L., *et al.* Ubiquitin-specific protease 21 aggravates enterovirus 71 (EV71) infection by restricting Lys48-linked ubiquitination of EV71-2A protease. *Int. J. Biol. Macromol.* **314**, 144202 (2025).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/15/2025

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