

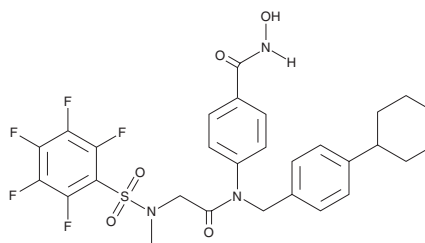
PRODUCT INFORMATION



SH5-07

Item No. 36818

CAS Registry No.: 1456632-41-9
Formal Name: 4-[[[(4-cyclohexylphenyl)methyl]
[2-[methyl[(2,3,4,5,6-pentafluorophenyl)sulfonyl]
amino]acetyl]amino]-N-hydroxy-benzamide
MF: C₂₉H₂₈F₅N₃O₅S
FW: 625.6
Purity: ≥95%
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

SH5-07 is supplied as a solid. A stock solution may be made by dissolving the SH5-07 in the solvent of choice, which should be purged with an inert gas. SH5-07 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SH5-07 in these solvents is approximately 3 mg/ml.

Description

SH5-07 is a STAT3 inhibitor ($K_i = 10.46 \mu\text{M}$).¹ It is selective for STAT3 over STAT1 ($K_i = >100 \mu\text{M}$). SH5-07 prevents constitutively active STAT3 DNA binding in NIH3T3 fibroblast nuclear extracts ($\text{IC}_{50} = 3.9 \mu\text{M}$).² It is cytotoxic to AR230 and imatinib-resistant AR230 chronic myeloid leukemia (CML) cells ($\text{IC}_{50\text{s}} = 8.1$ and $7 \mu\text{M}$, respectively) and a variety of glioblastoma cancer stem cells (CSCs; $\text{IC}_{50\text{s}} = 0.195\text{-}1.12 \mu\text{M}$).^{2,3} SH5-07 reduces tumor growth in MDA-MB-231 breast cancer and U-251MG glioblastoma mouse xenograft models when administered at doses of 3 and 5 mg/kg, respectively.² It is also active against *T. gondii* when used at a concentration of $5 \mu\text{M}$.⁴

References

- Haftchenary, S., Luchman, H.A., Jouk, A.O., *et al.* Potent targeting of the STAT3 protein in brain cancer stem cells: A promising route for treating glioblastoma. *ACS Med. Chem. Lett.* **4(11)**, 1102-1107 (2013).
- Yue, P., Lopez-Tapia, F., Paladino, D., *et al.* Hydroxamic acid and benzoic acid-based STAT3 inhibitors suppress human glioma and breast cancer phenotypes *in vitro* and *in vivo*. *Cancer Res.* **76(3)**, 652-663 (2016).
- Ali, A.M., Gómez-Biagi, R.F., Rosa, D.A., *et al.* Disarming an electrophilic warhead: Retaining potency in tyrosine kinase inhibitor (TKI)-resistant CML lines while circumventing pharmacokinetic liabilities. *ChemMedChem* **11(8)**, 850-861 (2016).
- Li, S., Ying, Z., Xue, Y., *et al.* Effects of different drugs and hormone treatment on *Toxoplasma gondii* glutathione S-transferase 2. *Parasit. Vectors* **15(1)**, 461 (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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