

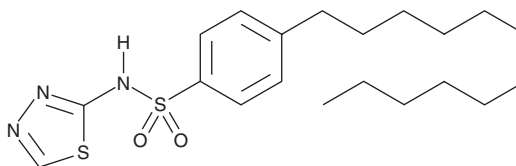
PRODUCT INFORMATION



PHT-427

Item No. 24188

CAS Registry No.: 1191951-57-1
Formal Name: 4-dodecyl-N-1,3,4-thiadiazol-2-yl-benzenesulfonamide
Synonym: Akt Inhibitor XIV
MF: C₂₀H₃₁N₃O₂S₂
FW: 409.6
Purity: ≥98%
UV/Vis.: λ_{max}: 226, 270 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

PHT-427 is supplied as a crystalline solid. A stock solution may be made by dissolving the PHT-427 in the solvent of choice, which should be purged with an inert gas. PHT-427 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of PHT-427 in these solvents is approximately 16 and 33 mg/ml, respectively.

PHT-427 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PHT-427 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PHT-427 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PHT-427 is an inhibitor of the serine/threonine kinases Akt and phosphoinositide-dependent protein kinase-1 (PDK1) with K_i values of 2.7 and 5.2 μM, respectively, that selectively binds to the pleckstrin homology binding domain of both kinases.¹ PHT-427 (10 μM) inhibits PDK1 and Akt autophosphorylation in BxPC-3 prostate cancer cells. *In vivo*, PHT-427 (125-250 mg/kg) reduces tumor growth in BxPC-3, Panc-1, MiaPaCa-2, PC3, SKOV3, A549, and MCF-7 xenograft mouse models, with up to 80% reduction in growth for those containing PIK3CA mutations. PHT-427 (200 mg/kg) also enhances the antitumor effect of paclitaxel (Item No. 10461) in an MCF-7 breast cancer xenograft mouse model.

Reference

1. Meuillet, E.J., Zuohe, S., Lemos, R., *et al.* Molecular pharmacology and antitumor activity of PHT-427, a novel Akt/phosphatidylinositide-dependent protein kinase 1 pleckstrin homology domain inhibitor. *Mol. Cancer Ther.* **9**(3), 706-717 (2010).

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