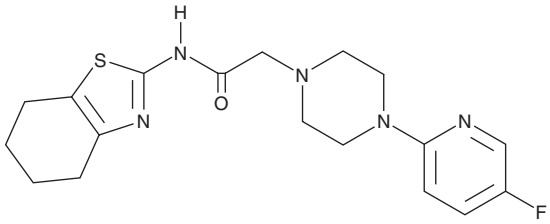
PRODUCT INFORMATION

Arylpiperazine 5k

Item No. 38135

CAS Registry No.:	1431945-95-7
Formal Name:	4-(5-fluoro-2-pyridinyl)-N-(4,5,6,7-tetrahydro-2-benzothiazolyl)-1-piperazineacetamide
Synonym:	DS22420314
MF:	$C_{18}H_{22}FN_5OS$
FW:	375.5
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

Arylpiperazine 5k is supplied as a solid. A stock solution may be made by dissolving the arylpiperazine 5k in the solvent of choice, which should be purged with an inert gas. Arylpiperazine 5k is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of arylpiperazine 5k in these solvents is approximately 5 mg/ml. It is slightly soluble in ethanol.

Description

Arylpiperazine 5k is an inhibitor of fatty acid transport protein 1 (FATP1; IC_{50} = 4.6 nM for the human protein).[1] It reduces the accumulation of neutral and polar lipids in MDA-MB-231 breast cancer cells induced by linoleic acid (Item Nos. 90150 | 90150.1 | 21909) when used at a concentration of 12.5 µM.[2] Arylpiperazine 5k (12.5 µM) decreases ATP (Item No. 14498) and BODIPY-palmitate (Item No. 26749) levels in BJAB human lymphoma cells with a deletion of CD37, which is also a negative regulator of fatty acid uptake, but not in wild-type BJAB cells.[3] It induces cell death in MDA-MB-231, MCF-7, HCC1806, and BT474 human breast cancer cells when used at a concentration of 12.5 µM.

References

1. Matsufuji, T., Ikeda, M., Naito, A., *et al.* Arylpiperazines as fatty acid transport protein 1 (FATP1) inhibitors with improved potency and pharmacokinetic properties. *Bioorg. Med. Chem. Lett.* **23(9)**, 2560-2565 (2013).
2. Mendes, C., Lopes-Coelho, F., Ramos, C., *et al.* Unraveling FATP1, regulated by ER-β, as a targeted breast cancer innovative therapy. *Sci. Rep.* **9(1)**, 14107 (2019).
3. Peeters, R., Cuenca-Escalona, J., Zaal, E.A., *et al.* Fatty acid metabolism in aggressive B-cell lymphoma is inhibited by tetraspanin CD37. *Nat. Commun.* **13(1)**, 5371 (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.

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, 08/16/2023

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