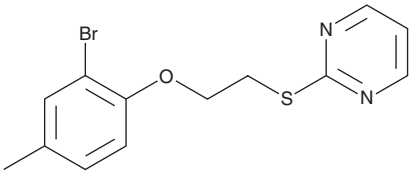
PRODUCT INFORMATION

ZLN024

Item No. 21644

CAS Registry No.:	723249-01-2
Formal Name:	2-[[2-(2-bromo-4-methylphenoxy)ethyl] thio]-pyrimidine
MF:	$C_{13}H_{13}BrN_2OS$
FW:	325.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 249, 282 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

ZLN024 is supplied as a crystalline solid. A stock solution may be made by dissolving the ZLN024 in the solvent of choice, which should be purged with an inert gas. ZLN024 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ZLN024 in these solvents is approximately 5, 25, and 30 mg/ml, respectively.

ZLN024 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ZLN024 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ZLN024 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

ZLN024 is an allosteric activator of AMP-activated protein kinase (AMPK) heterotrimers (EC_{50}s = 0.42 and 0.95 µM for α1β1γ1 and α2β1γ1, respectively).[1] Activation of AMPK by ZLN024 requires phosphorylation of AMPK on Thr^{172}, and ZLN024 protects Thr^{172} from dephosphorylation by protein phosphatase 2Cα.[1] ZLN024 stimulates glucose uptake and fatty acid oxidation in L6 myotubes. In primary hepatocytes, ZLN024 decreases fatty acid synthesis and glucose output.[1] ZLN024 reduces liver triacylglycerol and total cholesterol content and improves glucose tolerance in *db/db* mice.[1]

Reference

1. Zhang, L.-N., Xu, L., Zhou, H.-Y., *et al*. Novel small-molecule AMP-activated protein kinase allosteric activator with beneficial effects in *db/db* mice. *PLoS One* **8(8)**, e72092 (2013).

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