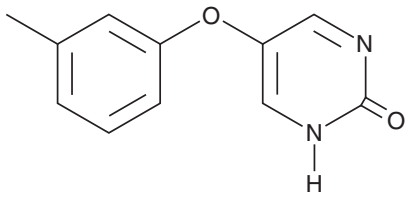
PRODUCT INFORMATION

MLR-1023

Item No. 21496

CAS Registry No.:	41964-07-2
Formal Name:	5-(3-methylphenoxy)-2(1H)-pyrimidinone
Synonyms:	CP 26,154, NSC 314335
MF:	$C_{11}H_{10}N_2O_2$
FW:	202.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 225, 276, 330 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

MLR-1023 is supplied as a crystalline solid. A stock solution may be made by dissolving the MLR-1023 in the solvent of choice. MLR-1023 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of MLR-1023 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

MLR-1023 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MLR-1023 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MLR-1023 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MLR-1023 is an allosteric activator of Lyn kinase (EC_{50} = 63 nM).[1] It has no significant activity against a panel of related kinases. MLR-1023 is orally bioavailable and reduces blood glucose levels in mice subjected to an oral glucose tolerance test.[1] This effect is insulin-dependent, with MLR-1023 increasing insulin receptor sensitivity.[2] MLR-1023 produces a dose-dependent and durable glucose-lowering effect in chronically treated *db/db* mice without causing weight gain.[2]

References

1. Saporito, M.S., Ochman, A.R., Lipinski, C.A., *et al.* MLR-1023 is a potent and selective allosteric activator of Lyn kinase *in vitro* that improves glucose tolerance *in vivo*. *J. Pharmacol. Exp. Ther.* **342(1)**, 15-22 (2012).
2. Ochman, A.R., Lipinski, C.A., Handler, J.A., *et al.* The Lyn kinase activator MLR-1023 is a novel insulin receptor potentiator that elicits a rapid-onset and durable improvement in glucose homeostasis in animal models of type 2 diabetes. *J. Pharmacol. Exp. Ther.* **342(1)**, 23-32 (2012).

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