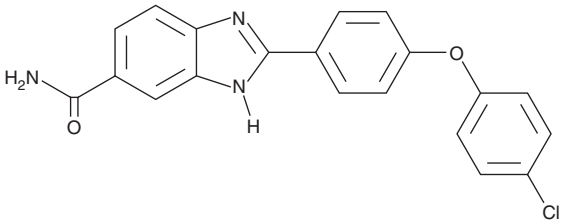
PRODUCT INFORMATION

Chk2 Inhibitor II

Item No. 17552

CAS Registry No.: 516480-79-8
Formal Name: 2-[4-(4-chlorophenoxy)phenyl]-1H-benzimidazole-6-carboxamide
Synonyms: BML-277, C 3742, Checkpoint Kinase 2 Inhibitor II
MF: $C_{20}H_{14}ClN_3O_2$
FW: 363.8
Purity: ≥98%
UV/Vis.: λ_{max}: 282, 256, 314 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

Chk2 inhibitor II is supplied as a crystalline solid. A stock solution may be made by dissolving the Chk2 inhibitor II in the solvent of choice, which should be purged with an inert gas. Chk2 inhibitor II is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Chk2 inhibitor II in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Chk2 inhibitor II is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Chk2 inhibitor II should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Chk2 inhibitor II has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Chk2 inhibitor II is a selective, ATP-competitive inhibitor of the DNA damage control kinase, checkpoint kinase 2 (IC_{50} = 15 nM).[1] It has been shown to prevent apoptosis in human T-cells exposed to ionizing radiation (EC_{50} = 3-7.6 µM).[1] This compound has been used to target the role of Chk2 in cellular signaling in response to DNA damage.[2]

References

1. Arienti, K.L., Brunmark, A., Axe, F.U., *et al.* Checkpoint kinase inhibitors: SAR and radioprotective properties of a series of 2-arylbenzimidazoles. *J. Med. Chem.* **48(6)**, 1873-1885 (2005).
2. Pereg, Y., Lam, S., Teunisse, A., *et al.* Differential roles of ATM- and Chk2-mediated phosphorylations of Hdmx in response to DNA damage. *Mol. Cell. Biol.* **26(18)**, 6819-6831 (2006).

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