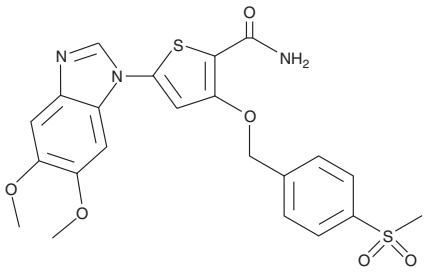
PRODUCT INFORMATION

CAY10575

Item No. 10011248

CAS Registry No.:	916985-21-2
Formal Name:	5-(5,6-dimethoxy-1H-benzimidazol-1-yl)-3-[[4-(methylsulfonyl)phenyl]methoxy]-2-thiophenecarboxamide
Synonyms:	IKK2 Inhibitor 3, Polo-like Kinase Inhibitor 1
MF:	$C_{22}H_{21}N_3O_6S_2$
FW:	487.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 295 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

CAY10575 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10575 in the solvent of choice, which should be purged with an inert gas. CAY10575 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CAY10575 in these solvents is approximately 10 and 1 mg/ml, respectively.

CAY10575 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10575 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CAY10575 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CAY10575 inhibits IKKβ and polo-like kinase 1 (Plk1; IC_{50}s = 0.075 and 0.125 µM, respectively).[1,3] It also inhibits IKKε (IC_{50} = <15.8 µM).[1] It increases neurite total length in hippocampal neurons isolated from rat embryos when used at concentrations ranging from 0.8 to 20 µM.[2]

References

1. Bamborough, P., Christopher, J.A., Cutler, G.J., *et al.* 5-(1H-benzimidazol-1-yl)-3-alkoxy-2-thiophene carbonitriles as potent, selective, inhibitors of IKK-ε kinase. *Bioorg. Med. Chem. Lett.* **16**, 6236-6240 (2006).
2. Al-Ali, H., Schürer, S.C., Lemmon, V.P., *et al.* Chemical interrogation of the neuronal kinome using a primary cell-based screening assay. *ACS Chem. Biol.* **8(5)**, 1027-1036 (2013).
3. Xie, H.-Z., Liu, L.-Y., Ren, J.-X., *et al.* Pharmacophore modeling and hybrid virtual screening for the discovery of novel IκB kinase 2 (IKK2) inhibitors. *J. Biomol. Struct. Dyn.* **29(1)**, 165-179 (2011).

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