

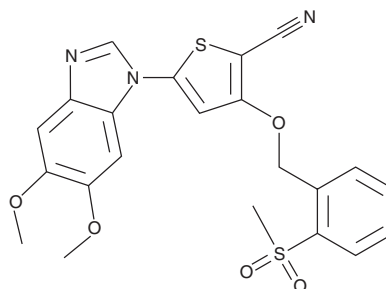
Product Information



CAY10576

Catalog No. 10011249

CAS Registry No.: 862812-98-4
Formal Name: 5-(5,6-dimethoxy-1H-benzimidazol-1-yl)-3-[[2-(methylsulfonyl)phenyl]methoxy]-2-thiophenecarbonitrile
MF: C₂₂H₁₉N₃O₅S₂
FW: 469.5
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that CAY10576 be stored as supplied at -20°C. It should be stable for at least two years.

CAY10576 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10576 in an organic solvent purged with an inert gas. CAY10576 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CAY10576 in these solvents is approximately 12.5 and 20 mg/ml, respectively.

CAY10576 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10576 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CAY10576 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.

The NF-κB/Rel transcription factors, known to be involved in the regulation of pro-inflammatory cytokines and the pathogenesis of a variety of diseases, are present in the cytosol in an inactive state, complexed with inhibitory IκB proteins. NF-κB is activated upon degradation of IκB following IKK-α and IKK-β phosphorylation. IKK-ε, a homolog of IKK-α and IKK-β, can also activate NF-κB. IKK-ε is expressed predominantly in immune cells and is thought to play a role in the immune response. CAY10576 is a benzimidazole analog that selectively inhibits IKK-ε with an IC₅₀ value of 40 nM and is essentially inactive at IKK-α and IKK-β.¹

Reference

1. Bamborough, P., Christopher, J.A., Cutler, G.J., *et al.* 5-(1H-benzimidazol-1-yl)-3-alkoxy-2-thiophenecarbonitriles as potent, selective, inhibitors of IKK-ε kinase. *Bioorganic & Medicinal Chemistry Letters* **16**, 6236-6240 (2006).

Related Product

Phenethyl Caffiate - Cat. No. 70750 • CAY10470 - Cat. No. 10006734 • NF-κB (human p50) Transcription Factor Assay Kit - Cat. No. 10006912 • NF-κB (p65) Transcription Factor Assay Kit - Cat. No. 10007889 • NF-κB (human p50/p65) Combo Transcription Factor Assay Kit - Cat. No. 10011223 • CAY10575 - Cat. No. 10011248

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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