

# PRODUCT INFORMATION



**BMS 509744**

Item No. 34148

**CAS Registry No.:** 439575-02-7  
**Formal Name:** N-[5-[[5-[(4-acetyl-1-piperazinyl)carbonyl]-4-methoxy-2-methylphenyl]thio]-2-thiazolyl]-4-[[[(1,2,2-trimethylpropyl)amino]methyl]-benzamide

**MF:** C<sub>32</sub>H<sub>41</sub>N<sub>5</sub>O<sub>4</sub>S<sub>2</sub>

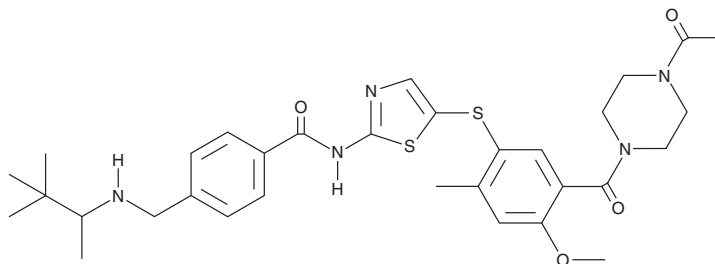
**FW:** 623.8

**Purity:** ≥95%

**Supplied as:** A 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

BMS 509744 is supplied as a solid. A stock solution may be made by dissolving the BMS 509744 in the solvent of choice, which should be purged with an inert gas. BMS 509744 is slightly soluble (0.1-1 mg/ml) in methanol and DMSO.

## Description

BMS 509744 is an inhibitor of IL-2-inducible T cell kinase (Itk; IC<sub>50</sub> = 19 nM).<sup>1</sup> It is selective for Itk over 18 other kinases (IC<sub>50</sub>s = >1,100 nM for all). BMS 509744 inhibits IL-2 secretion from Jurkat T cells and isolated human peripheral blood mononuclear cells (PBMCs) induced by antibodies targeting CD3 (IC<sub>50</sub>s = 0.25 and 0.39 μM, respectively). It decreases serum levels of IL-2 and the lung infiltration of total immune cells and eosinophils in a mouse model of ovalbumin-induced lung inflammation when administered at a dose of 25 mg/kg. Topical application of BMS 509744 (3%) reduces ear skin thickness and decreases the number of infiltrating immune cells in a mouse model of imiquimod-induced skin inflammation.<sup>2</sup>

## References

1. Lin, T.A., McIntyre, K.W., Das, J., *et al.* Selective Itk inhibitors block T-cell activation and murine lung inflammation. *Biochemistry* **43**(34), 11056-11062 (2004).
2. Otake, S., Otsubaki, T., Uesato, N., *et al.* Topical application of BMS-509744, a selective inhibitor of interleukin-2-inducible T cell kinase, ameliorates imiquimod-induced skin inflammation in mice. *Biol. Pharm. Bull.* **44**(4), 528-534 (2021).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM