

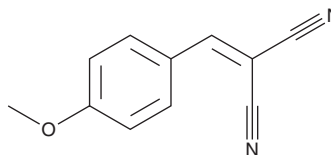
PRODUCT INFORMATION



AG-9

Item No.42420

CAS Registry No.: 2826-26-8
Formal Name: 2-[(4-methoxyphenyl)methylene]-propanedinitrile
Synonyms: NSC 1343, NSC 637326, Tyrphostin A1, Tyrphostin AG-9
MF: C₁₁H₈N₂O
FW: 184.2
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

AG-9 is supplied as a solid. A stock solution may be made by dissolving the AG-9 in the solvent of choice, which should be purged with an inert gas. AG-9 is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

Description

AG-9 is an immunomodulatory agent.^{1,2} It selectively inhibits IL-12-induced tyrosine phosphorylation of TYK2 and STAT3 over JAK2 in primary mouse T cells activated by concanavalin A (Item No. 14951) when used at a concentration of 10 μM.¹ Unlike most tyrphostins, it does not inhibit EGFR (IC₅₀ = >1,250 μM) and has commonly been used as an inactive control for tyrphostin tyrosine kinase inhibitory activity.^{2,3} AG-9 inhibits IL-12 production and NF-κB translocation induced by CD40 ligand (CD40L) in primary mouse macrophages and reduces the development and severity of experimental autoimmune encephalomyelitis (EAE) in mice.² It also inhibits GABA-induced activation of wild-type GABA_A receptors and GABA_A receptors containing tyrosine-to-phenylalanine mutations at positions 365 and 367 expressed in *Xenopus* oocytes when used at a concentration of 200 μM.⁴

References

1. Bright, J.J., Du, C., and Sriram, S. Tyrphostin B42 inhibits IL-12-induced tyrosine phosphorylation and activation of Janus kinase-2 and prevents experimental allergic encephalomyelitis. *J. Immunol.* **162**(10), 6255-6262 (1999).
2. Du, C., Bright, J.J., and Sriram, S. Inhibition of CD40 signaling pathway by tyrphostin A1 reduces secretion of IL-12 in macrophage, Th1 cell development and experimental allergic encephalomyelitis in SJL/J mice. *J. Neuroimmunol.* **114**(1-2), 69-79 (2001).
3. Gazit, A., Yaish, P., Gilon, C., et al. Tyrphostins I: Synthesis and biological activity of protein tyrosine kinase inhibitors. *J. Med. Chem.* **32**(10), 2344-2352 (1989).
4. Dunne, E.L., Moss, S.J., and Smart, T.G. Inhibition of GABA_A receptor function by tyrosine kinase inhibitors and their inactive analogues. *Mol. Cell. Neurosci.* **12**(4-5), 300-310 (1998).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/10/2024

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