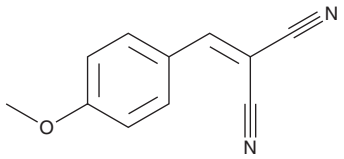
PRODUCT INFORMATION

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:	$C_{11}H_8N_2O$
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 (IC_{50} = >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).

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