

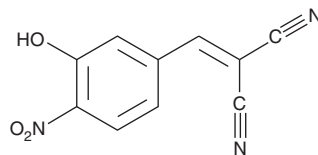
Product Information



AG-126

Item No. 13297

CAS Registry No.: 118409-62-4
Formal Name: 2-[(3-hydroxy-4-nitrophenyl)methylene]-propanedinitrile
Synonym: Tyrphostin AG-126
MF: C₁₀H₅N₃O₃
FW: 215.2
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that AG-126 be stored as supplied at -20°C. It should be stable for at least two years.

AG-126 is supplied as a crystalline solid. A stock solution may be made by dissolving the AG-126 in an organic solvent purged with an inert gas. AG-126 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AG-126 in ethanol is approximately 0.15 mg/ml and approximately 10 mg/ml in DMSO and DMF.

AG-126 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AG-126 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AG-126 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Tyrphostins are a family of protein tyrosine kinase inhibitors originally developed to inhibit cell growth by blocking the activity of certain growth factor receptor kinases (GFRK). The tyrphostin AG-126 selectively inhibits the phosphorylation of ERK1 (p44) and ERK2 (p42) at 25-50 μM.^{1,2} It blocks the production of TNF-α *in vitro*² and *in vivo*,¹ attenuating signaling through NF-κB,¹ the induced expression of COX-2 and iNOS,^{3,4} and the inflammatory response in diverse animal models.^{3,5} AG-126 is a poor inhibitor of epidermal GFRK (IC₅₀ = 450 μM)⁶ and platelet-derived GFRK (IC₅₀ > 100 μM).⁷

References

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2. Hanisch, U.-K., Prinz, M., Angstwurm, K., *et al.* The protein tyrosine kinase inhibitor AG126 prevents the massive microglial cytokine induction by pneumococcal cell walls. *Eur. J. Immunol.* **31**, 2104-2115 (2001).
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4. Ruetten, H. and Thiernemann, C. Effects of tyrphostins and genistein on the circulatory failure and organ dysfunction caused by endotoxin in the rat: A possible role for protein tyrosine kinase. *Brit. J. Pharmacol.* **122**, 59-70 (1997).
5. Chatterjee, P.K., Patel, N.S.A., Kvale, E.O., *et al.* The tyrosine kinase inhibitor tyrphostin AG126 reduces renal ischemia/reperfusion injury in the rat. *Kidney Int.* **64**, 1605-1619 (2003).
6. 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).
7. Sagara, Y., Ishige, K., Tsai, C., *et al.* Tyrphostins protect neuronal cells from oxidative stress. *J. Biol. Chem.* **277**(39), 36204-36215 (2002).

Related Products

AG-879 - Item No. 10793 • AG-825 - Item No. 10010243 • AG-1478 - Item No. 10010244 • AG-490 - Item No. 10010311 • AG-82 - Item No. 10010312 • AG-370 - Item No. 10010568 • AG-1296 - Item No. 10010592

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC 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 *via* email to your institution.

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