

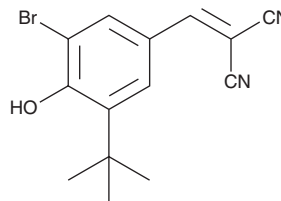
PRODUCT INFORMATION



AG-1024

Item No. 14833

CAS Registry No.: 65678-07-1
Formal Name: 2-[[3-bromo-5-(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]-propanedinitrile
Synonyms: AGS 200, Tyrphostin AG-1024
MF: C₁₄H₁₃BrN₂O
FW: 305.2
Purity: ≥98%
UV/Vis.: λ_{max}: 255, 348, 359, 452 nm
Supplied as: A crystalline 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-1024 is supplied as a crystalline solid. A stock solution may be made by dissolving the AG-1024 in the solvent of choice. AG-1024 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of AG-1024 in these solvents is approximately 1.6, 16, and 5 mg/ml, respectively.

AG-1024 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AG-1024 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AG-1024 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.

Description

The binding of insulin-like growth factor 1 (IGF-1) to the IGF-1 receptor (IGF-1R) initiates a cascade of reactions that promote cell growth and transformation by activating the PI3K/Akt signaling pathway, inhibiting apoptotic pathways, and mediating mitogenic actions. Overexpression of IGF-1R confers tumorigenic potential to cells as well as protection from apoptosis. AG-1024 is a selective inhibitor of IGF-1R that inhibits insulin-stimulated cellular proliferation and IGF-1R autophosphorylation with IC₅₀ values of 0.4 and 7 μM, respectively.¹ At 10 nM, AG-1024 can inhibit proliferation and induce apoptosis in human breast cancer MCF-7 cells, and it inhibits autocrine growth of human prostate cancer DU145 cells with an IC₅₀ value of 2.5 μM.^{2,3}

References

1. Pjrrizas, M., Gazit, A., Levitzki, A., *et al.* Specific inhibition of insulin-like growth factor-1 and insulin receptor tyrosine kinase activity and biological function by tyrphostins. *Endocrinology* **138(4)**, 1427-1433 (1997).
2. Wen, B., Deutsch, E., Marangoni, E., *et al.* Tyrphostin AG 1024 modulates radiosensitivity in human breast cancer cells. *Br. J. Cancer* **85(12)**, 2017-2021 (2001).
3. Kisieleska, J., Ligeza, J., and Klein, A. The effect of tyrosine kinase inhibitors, tyrphostins: AG1024 and SU1498, on autocrine growth prostate cancer cells (DU145). *Folia Histochem. Cytobiol.* **46(2)**, 185-191 (2008).

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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