

Small Molecules

AG-490

Tyrosine kinase inhibitor; Inhibits EGFR, HER2, JAK2, JAK3, and STAT5a/b

Catalog # 72932
72934

10 mg
50 mg



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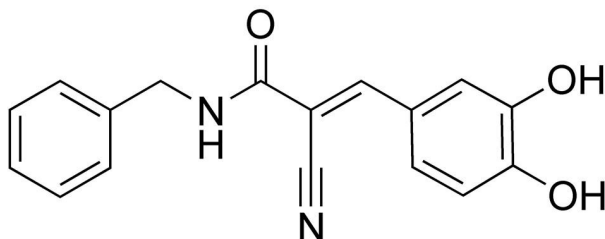
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Product Description

AG-490 is a member of the tyrphostin family of small molecule inhibitors of tyrosine kinases including EGFR (Gazit et al.), HER2 (Gazit et al.), JAK2 (Burger et al.), JAK3 (Brown et al.), and STAT5a/b (Wang et al.) with IC₅₀ values of 0.1, 13.5, 11, and 12 μM, respectively. AG-490 does not inhibit LCK, LYN, BTK, SYK, or SRC tyrosine kinases (Meydan et al.).

Molecular Name:	AG-490
Alternative Names:	Tyrphostin AG-490
CAS Number:	133550-30-8
Chemical Formula:	C ₁₇ H ₁₄ N ₂ O ₃
Molecular Weight:	294.3 g/mol
Purity:	≥ 98%
Chemical Name:	alpha-Cyano-(3,4-dihydroxy)-N-benzylcinnamide
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility:	· DMSO ≤ 100 mM · Absolute ethanol ≤ 30 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 3.40 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION

- Induces differentiation of mouse (OG2) embryonic stem cells, with LIF and BMP4 (Chen et al.).

CANCER RESEARCH

- Blocks growth of acute lymphoblastic leukemia pre-B cells by inducing programmed cell death, via inhibition of JAK2 (Meydan et al.).
- Inhibits proliferation of cervical carcinoma cell lines (Soto-Cruz et al.).
- Inhibits STAT3 phosphorylation and induced translocation of beta-catenin to the cytoplasm in the colorectal cell line SW480 (Kawada et al.).
- Induces S phase arrest of GL15 glioblastoma cells via JAK2 inhibition (Sciaccaluga et al.).
- Inhibits EGF-dependant proliferation of NIH3T3 cell lines (Gazit et al.).
- Blocks IL-2 induced thymidine incorporation in T-cell lines (Wang et al.).

References

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- Soto-Cruz I et al. (2008) The Tyrphostin B42 Inhibits Cell Proliferation and HER-2 Autophosphorylation in Cervical Carcinoma Cell Lines. *Cancer Invest* 26(2): 136–144.
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Related Small Molecules

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