Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

AG-490

Catalog No: tcsc0108

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
133550-30-8

Formula:
$C_{17}H_{14}N_2O_3$

Pathway:
JAK/STAT Signaling;Protein Tyrosine Kinase/RTK;Autophagy;JAK/STAT Signaling;Stem Cell/Wnt

Target:
EGFR;EGFR;Autophagy;STAT;STAT

Storage Buffer:
5% DMSO+40% PEG300+5% Tween80+50% 6.25mg/ml

Purity / Grade:
>98%

Solubility:
DMSO 58.0 mg/mL (197.1 mM)
Ethanol 6.0 mg/mL (20.4 mM)
Water Insoluble

Storage Instruction:

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Powder: -20°C for 3 years In Solvent: -80°C 12 months

Alternative Names:
Tyrphostin AG 490

Observed Molecular Weight:
294.3

Notes

Mechanism: AG-490 blocks protein tyrosine kinases by binding to the substrate-binding site.

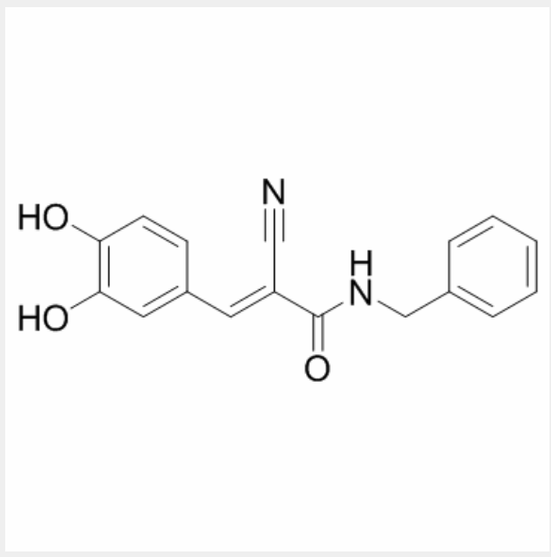
Product Description

AG-490 is an tyrosine kinase inhibitor, inhibits **EGFR** and **Stat-3**.

IC50 & Target: EGFR and Stat-3[1]

In Vitro: AG490 inhibits the activation of Stat-3 by selectively blocking JAK2. AG490 is used to selectively inhibit JAK/Stat-3 activation. At a dose of 10 μM, Stat-3 phosphorylation is decreased by >95% and cell viability is maintained. AG490 at a dose of 10 μM results in >95% decrease in pStat-3 in EGF-stimulated A431 cells with no effect on Stat-3 mass[1]. AG-490 is a potent inhibitor of the JAK3/STAT, JAK3/AP-1, and JAK3/MAPK pathways and their cellular consequences. AG-490 abolishes IL-2-inducible [^{3}H]thymidine incorporation in a dose-dependent manner, displaying an IC_{50} of 25 μM. AG-490 potently inhibits IL-2-mediated proliferation in T cells, results distinct from previous studies that showed this agent induced apoptosis in ALL cells while exerting apparently no effects on the growth of mitogen-stimulated normal T cells[2].

In Vivo: AG490 significantly inhibits the development of type 1 diabetes (T1D) ($p = 0.02$, $p = 0.005$; at two different time points). Monotherapy of newly diagnosed diabetic NOD mice with AG490 (1 mg/mouse) markedly results in disease remission in treated animals (n=23) in comparision to the absolute inability (0%; 0/10, p=0.003, Log-rank test) of DMSO and sustained eugluycemia is maintained for several months following drug withdrawal[3]. AG490 (1-10 μg) significantly attenuates ʎ-carrageenan-induced thermal hyperalgesia in a dose-dependent manner. AG490 also reduces mechanical hyperalgesia[4].



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Protocol

Preparing Stock Solution	Volume / Mass / Concentration	1 mg	5 mg	10 mg
	1mM	3.3979 mL	16.9895 mL	33.9789 mL
	5mM	0.6796mL	3.3979 mL	6.7958 mL
	10mM	0.3398 mL	1.6989 mL	3.3979 mL