

# 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:**

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.

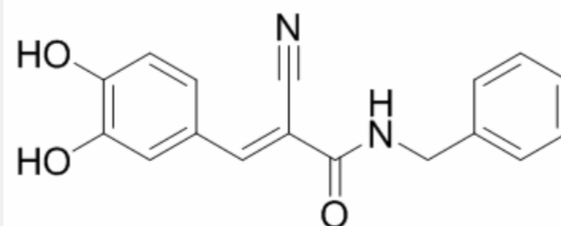
**Product Description**

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

IC50 & Target: EGFR and Stat-3<sup>[1]</sup>

**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<sup>[1]</sup>. 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 [<sup>3</sup>H]thymidine incorporation in a dose-dependent manner, displaying an IC<sub>50</sub> 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<sup>[2]</sup>.

**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 comparison to the absolute inability (0%; 0/10, p=0.003, Log-rank test) of DMSO and sustained euglycemia is maintained for several months following drug withdrawal<sup>[3]</sup>. AG490 (1-10 μg) significantly attenuates λ-carrageenan-induced thermal hyperalgesia in a dose-dependent manner. AG490 also reduces mechanical hyperalgesia<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!