

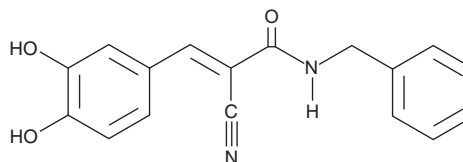
# PRODUCT INFORMATION



## AG-490

Item No. 10010311

**CAS Registry No.:** 133550-30-8  
**Formal Name:** (2E)-2-cyano-3-(3,4-dihydroxyphenyl)-N-(phenylmethyl)-2-propenamamide  
**Synonym:** Tyrphostin AG-490  
**MF:** C<sub>17</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 294.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 257, 363 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-490 is supplied as a crystalline solid. A stock solution may be made by dissolving the AG-490 in the solvent of choice, which should be purged with an inert gas. AG-490 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of AG-490 in these solvents is approximately 10, 30, and 25 mg/ml, respectively.

AG-490 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AG-490 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AG-490 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Protein tyrosine kinase (Ptk) inhibitors are potential antiproliferative agents for diseases caused by the hyperactivity of Ptk. Tyrphostins are a class of antiproliferative compounds which act as Ptk blockers.<sup>1</sup> Leukemic cells from patients in relapse have constitutively activated JAK2 Ptk. AG-490 is an inhibitor of JAK2 activity and selectively blocks leukemic cell growth *in vitro* and *in vivo* by inducing programmed cell death, with no deleterious effect on normal hematopoiesis. AG-490 almost completely blocks growth of all pre-B acute leukemia (ALL) cells at a concentration of 5 μM.<sup>2</sup> Furthermore, inhibition of JAK/STAT signaling in satellite cells *via* AG-490 and the STAT3 inhibitor 5,15-DPP (Item No. 16090) has been used to stimulate muscle regeneration in a model of aging skeletal muscle deterioration.<sup>3</sup>

### References

1. 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).
2. Meydan, N., Grunberger, T., Dadi, H., *et al.* Inhibition of acute lymphoblastic leukaemia by a Jak-2 inhibitor. *Nature* **379**(6566), 645-648 (1996).
3. Price, F.D., von Maltzahn, J., Bentzinger, C.F., *et al.* Inhibition of JAK-STAT signaling stimulates adult satellite cell function. *Nat. Med.* **20**(10), 1174-1181 (2014).

#### 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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