

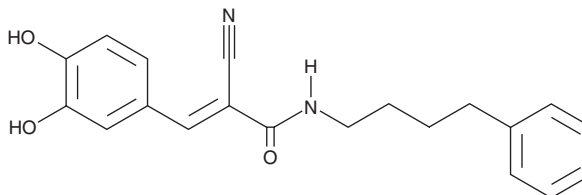
# PRODUCT INFORMATION



## AG-556

Item No. 33335

**CAS Registry No.:** 133550-41-1  
**Formal Name:** (2E)-2-cyano-3-(3,4-dihydroxyphenyl)-N-(4-phenylbutyl)-2-propenamide  
**Synonyms:** Tyrphostin 56, Tyrphostin AG-556  
**MF:** C<sub>20</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 336.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 256, 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-556 is supplied as a crystalline solid. A stock solution may be made by dissolving the AG-556 in the solvent of choice, which should be purged with an inert gas. AG-556 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of AG-556 in these solvents is approximately 30 mg/ml.

### Description

AG-556 is a tyrphostin inhibitor of EGFR (IC<sub>50</sub> = 5 μM).<sup>1</sup> It is selective for EGFR over HER2 (IC<sub>50</sub> = >500 μM). AG-556 inhibits EGF-induced growth of HER14 cells (IC<sub>50</sub> = 3 μM). It inhibits hydrogen peroxide-induced increases in intracellular calcium in HEK293 cells expressing human transient receptor potential melastatin 2 (TRPM2; IC<sub>50</sub> = 0.94 μM), as well as HEK293 cells expressing human TRP ankyrin 1 (TRPA1) when used at a concentration of 3 μM.<sup>2</sup> AG-556 (200 μg/animal per day) reduces the incidence, severity, and duration of disease in a mouse model of experimental autoimmune encephalomyelitis (EAE).<sup>3</sup> It reduces edema, demyelination, and myeloperoxidase (MPO) activity, a marker of neutrophil infiltration, in spinal cord tissue, as well as improves motor function in a mouse model of extradural compression-induced spinal cord injury when administered at a dose of 10 mg/kg.<sup>4</sup>

### References

1. Gazit, A., Oshero, N., Posner, I., *et al.* Tyrphostins. 2. Heterocyclic and α-substituted benzylidenemalonitrile tyrphostins as potent inhibitors of EGF receptor and ErbB2/neu tyrosine kinases. *J. Med. Chem.* **34**(6), 1896-1907 (1991).
2. Toda, T., Yamamoto, S., Yonezawa, R., *et al.* Inhibitory effects of Tyrphostin AG-related compounds on oxidative stress-sensitive transient receptor potential channel activation. *Eur. J. Pharmacol.* **786**, 19-28 (2016).
3. Brenner, T., Poradosu, E., Soffer, D., *et al.* Suppression of experimental autoimmune encephalomyelitis by tyrphostin AG-556. *Exp. Neurol.* **154**(2), 489-498 (1998).
4. Genovese, T., Mazon, E., Esposito, E., *et al.* Inhibition of tyrosine kinase-mediated cellular signalling by Tyrphostins AG126 and AG556 modulates secondary damage in experimental spinal cord trauma. *Neuropharmacology* **52**(7), 1454-1471 (2007).

#### 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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