

Product Data Sheet

Product Name: Tyrphostin 9

Cat. No.: GC10758

Chemical Properties

Cas. No. 10537-47-0

Chemical Name 2-[(3,5-ditert-butyl-4-hydroxyphenyl)methylidene]propanedinitrile

SMILES CC(C)(C)C1=CC(=CC(=C1O)C(C)(C)C)C=C(C#N)C#N

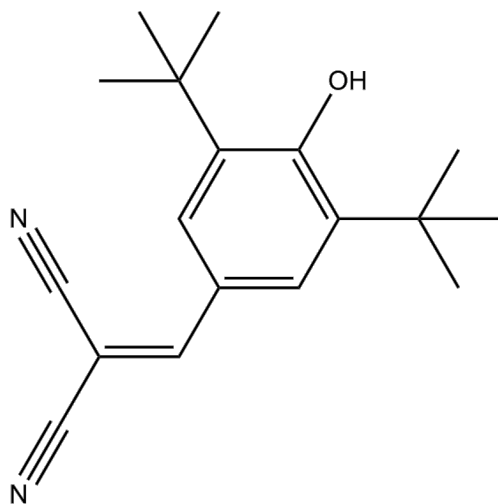
Formula $C_{18}H_{22}N_2O$ M.Wt 282.38

Solubility $\geq 14.1\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Tyrphostin 9 is an inhibitor of PDGFR with IC_{50} value of $\sim 2.5\mu\text{M}$ [1].

Tyrphostin 9 is generated as specific inhibitor of PDGFR in 1991. It also has inhibitory effect on the proliferation of SMC. Tyrphostin 9 potently inhibits the PDGF-dependent SMC proliferation with IC_{50}

Caution: Product has not been fully validated for medical applications. For research use only.

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value of 40nM and inhibits the PDGF-dependent autophosphorylation of PDGFR with IC₅₀ value of ~2.5μM. Besides that, Tyrphostin 9 also affects the phosphorylation of PLCγ (IC₅₀ value of about 2.5μM) and the PDGF-dependent c-fos expression. Moreover, Tyrphostin 9 is found to be an inhibitor of EGFR with IC₅₀ value of 460μM [1, 2].

In the rat carotid artery injury model, treatment of Tyrphostin 9 significantly reduces neointimal hyperplasia through inhibiting the tyrosine phosphorylation in injured arteries [1].

References:

- [1] Levitzki A. PDGF receptor kinase inhibitors for the treatment of restenosis. Cardiovascular research, 2005, 65(3): 581-586.
- [2] Levitzki A. Tyrphostins—potential antiproliferative agents and novel molecular tools. Biochemical pharmacology, 1990, 40(5): 913-918.

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