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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# Tyrphostin 8

**Cat. No.:** HY-W174279

**CAS No.:** 3785-90-8

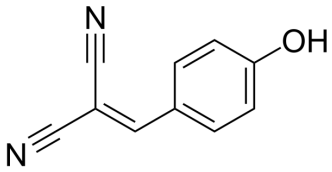
**Molecular Formula:** $C_{10}H_6N_2O$

**Molecular Weight:** 170.17

**Target:** EGFR; Ras; Phosphatase

**Pathway:** JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; GPCR/G Protein; MAPK/ERK Pathway; Metabolic Enzyme/Protease

**Storage:** 4°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 100 mg/mL (587.65 mM)
* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 5.8765 mL | 29.3824 mL | 58.7648 mL |
| | 5 mM | 1.1753 mL | 5.8765 mL | 11.7530 mL |
| | 10 mM | 0.5876 mL | 2.9382 mL | 5.8765 mL |

Please refer to the solubility information to select the appropriate solvent.

## BIOLOGICAL ACTIVITY

**Description**

Tyrphostin 8 is a tyrosine kinase, with an $IC_{50}$ of 560 μM for EGFR kinase. Tyrphostin 8 is also a GTPase inhibitor. Tyrphostin 8 can inhibit the protein serine/threonine phosphatase calcineurin ($IC_{50}$=21 μM)[1][2][3].

**$IC_{50}$ & Target**

| EGFR | calcineuin phosphatase |
|---|---|
| 560 μM ($IC_{50}$) | 21 μM ($IC_{50}$) |

**In Vitro**

Tyrphostin 8 (10-100 μM; pretreated for 20 min) blocks the Carbachol-initiated PKCδ tyrosine phosphorylation and ERK1/2 activation in parotid acinar cells[1].
Tyrphostin 8 (10-100 μM) produces a rapid and large increase in the basal $O_2$ consumption of parotid acinar[1].
Tyrphostin 8 (10-100 μM) reduces the parotid ATP content by -90% at the concentration of 100 μM[1].
Tyrphostin 8 increases apical-to-basolateral transport of insulin-transferrin conjugate by enhancing transferrin receptor-mediated transcytosis in filter-grown Caco-2 cell monolayer[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | Parotid acinar cells |
| Concentration: | 10, 100 μM |
| Incubation Time: | Pretreated for 20 min |
| Result: | Reduced the increase in tyrosine phosphorylation of PKCδ initiated by carbachol.<br>Reduced the activation of ERK1/2 by carbachol. |

**In Vivo**

Tyrphostin 8 improves the glucose-lowering effect of Insulin-transferrin in Streptozotocin-induced diabetic rats[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES


[1]. Soltoff SP. Evidence that tyrphostins AG10 and AG18 are mitochondrial uncouplers that alter phosphorylation-dependent cell signaling. J Biol Chem. 2004 Mar 19;279(12):10910-8.

[2]. Xia CQ, et, al. Tyrphostin-8 enhances transferrin receptor-mediated transcytosis in Caco-2- cells and inreases hypoglycemic effect of orally administered insulin-transferrin conjugate in diabetic rats. Pharm Res. 2001 Feb;18(2):191-5.

[3]. Martin BL. Inhibition of calcineurin by the tyrphostin class of tyrosine kinase inhibitors. Biochem Pharmacol. 1998 Aug 15;56(4):483-8.





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