



# SZABO SCANDIC

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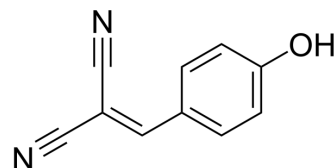
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## Tyrphostin 8

|                           |  |
|---------------------------|--|
| <b>Cat. No.:</b>          | HY-W174279   |
| <b>CAS No.:</b>           | 3785-90-8  |
| <b>Molecular Formula:</b> | C <sub>10</sub> H <sub>6</sub> N <sub>2</sub> O  |
| <b>Molecular Weight:</b>  | 170.17   |
| <b>Target:</b>            | EGFR; Ras; Phosphatase   |
| <b>Pathway:</b>           | JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; GPCR/G Protein; MAPK/ERK Pathway; Metabolic Enzyme/Protease |
| <b>Storage:</b>           | 4°C, stored under nitrogen<br>* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)         |



### BIOLOGICAL ACTIVITY

|                                     |   |   |            |                      |                |            |                  |                       |         |  |
|-------------------------------------|---|---|------------|----------------------|----------------|------------|------------------|-----------------------|---------|--|
| <b>Description</b>                  | Tyrphostin 8 is a tyrosine kinase, with an IC <sub>50</sub> of 560 μM for EGFR kinase. Tyrphostin 8 is also a GTPase inhibitor. Tyrphostin 8 can inhibit the protein serine/threonine phosphatase calcineurin (IC <sub>50</sub> =21 μM) <sup>[1][2][3]</sup> .  |   |            |                      |                |            |                  |                       |         |  |
| <b>IC<sub>50</sub> &amp; Target</b> | EGFR<br>560 μM (IC <sub>50</sub> )  | calcineuin phosphatase<br>21 μM (IC <sub>50</sub> ) |            |                      |                |            |                  |                       |         |  |
| <b>In Vitro</b>                     | <p>Tyrphostin 8 (10-100 μM; pretreated for 20 min) blocks the Carbachol-initiated PKCδ tyrosine phosphorylation and ERK1/2 activation in parotid acinar cells<sup>[1]</sup>.</p> <p>Tyrphostin 8 (10-100 μM) produces a rapid and large increase in the basal O<sub>2</sub> consumption of parotid acinar<sup>[1]</sup>.</p> <p>Tyrphostin 8 (10-100 μM) reduces the parotid ATP content by -90% at the concentration of 100 μM<sup>[1]</sup>.</p> <p>Tyrphostin 8 increases apical-to-basolateral transport of insulin-transferrin conjugate by enhancing transferrin receptor-mediated transcytosis in filter-grown Caco-2 cell monolayer<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Parotid acinar cells</td> </tr> <tr> <td>Concentration:</td> <td>10, 100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>Pretreated for 20 min</td> </tr> <tr> <td>Result:</td> <td>Reduced the increase in tyrosine phosphorylation of PKCδ initiated by carbachol.<br/>Reduced the activation of ERK1/2 by carbachol.</td> </tr> </table> |   | 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. |
| 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.  |   |            |                      |                |            |                  |                       |         |  |
| <b>In Vivo</b>                      | Tyrphostin 8 improves the glucose-lowering effect of Insulin-transferrin in Streptozotocin-induced diabetic rats <sup>[2]</sup> .<br>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.

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[2]. Xia CQ, et, al. Tyrphostin-8 enhances transferrin receptor-mediated transcytosis in Caco-2- cells and increases 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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