**Tyrphostin A1**

Cat. No.: HY-16668  
CAS No.: 2826-26-8  
Molecular Formula: C₁₁H₈N₂O  
Molecular Weight: 184.19  
Target: Interleukin Related  
Pathway: Immunology/Inflammation  
Storage: Powder -20°C 3 years  
4°C 2 years  
In solvent -80°C 6 months  
-20°C 1 month

### SOLVENT & SOLUBILITY

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>≥ 100 mg/mL (542.92 mM)</td>
<td>5.4292 mL</td>
<td>27.1459 mL</td>
<td>54.2918 mL</td>
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<tr>
<td></td>
<td>* &quot;≥&quot; means soluble, but saturation unknown.</td>
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</table>

#### In Vitro

- **Preparation of Stock Solutions**
  - 10 mM: 0.5429 mL  
  - 5 mM: 1.0858 mL  
  - 1 mM: 5.4292 mL

#### In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (13.57 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**

Tyrphostin A1(AG9) inhibits CD40L-stimulated IL-12 production in macrophage cultures and antigen-induced generation of Th1 cells. IC50 value: Target: IL-12 production inhibitor Addition of increasing concentration of A1 resulted in a dose dependent decrease of IL-12 p40, with maximal inhibition (62.5%) occurring at a dose of 10 μM. Tyrphostin A1 blocks CD40L-induced translocation of NF-κB to the nucleus, and reduces the activation of IL-12 p40 gene. In vivo therapy with A1 leads to decrease in generation of myelin basic protein (MBP) specific encephalitogenic T cells. In addition, treatment of SJL/J mice with A1 results in attenuation of experimental allergic encephalomyelitis (EAE) [1]. Tyrphostin A1 is a much weaker inhibitor of TK than other tyrphostins (IC50>1250 μM for epidermal growth factor receptor (EGFR) kinase), and therefore often used to differentiate TK-mediated effects of tyrphostins from other non-specific effects [2].
REFERENCES
