**Product Data Sheet**

## Carbidopa

**Cat. No.:** HY-B0311  
**CAS No.:** 28860-95-9  
**Molecular Formula:** $C_{10}H_{14}N_{2}O_{4}$  
**Molecular Weight:** 226.23  
**Target:** Others  
**Pathway:** Others  
**Storage:** Powder  
-20°C 3 years  
4°C 2 years  
In solvent  
-80°C 6 months  
-20°C 1 month

### SOLVENT & SOLUBILITY

**In Vitro**  
- **DMSO:** 4 mg/mL (17.68 mM; Need ultrasonic and warming)  
- **H$_2$O:** < 0.1 mg/mL (insoluble)

<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>1 mM</td>
<td>4.4203 mL</td>
<td>22.1014 mL</td>
<td>44.2028 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.8841 mL</td>
<td>4.4203 mL</td>
<td>8.8406 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.4420 mL</td>
<td>2.2101 mL</td>
<td>4.4203 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

### BIOLOGICAL ACTIVITY

**Description**  
Carbidopa is an inhibitor of DOPA decarboxylase, which is used in parkinson disease. Target: DOPA decarboxylase Carbidopa (CD), a competitive inhibitor of aromatic L-amino acid decarboxylase that does not cross the blood-brain barrier, is routinely administered with levodopa (LD) to patients with Parkinson disease (PD) to reduce the peripheral decarboxylation of LD to dopamine [1]. CD premedication improves 11C-5-HTP PET image quality and facilitates detection of NET lesions. Because of the similarity of metabolic pathways, this method could probably be applied to improve PET imaging using other tracers like 18F-DOPA and 11C-DOPA [2]. Carbidopa (100 microM) decreased growth of (but did not kill) SK-N-SH neuroblastoma and A204 rhabdomyosarcoma cells and did not affect proliferation of DU 145 prostate, MCF7 breast, or NCI-H460 large cell lung carcinoma lines. Sublethal doses of carbidopa produced additive cytotoxic effects in carcinoid cells in combination with etoposide and cytotoxic synergy in SCLC cells when coincubated with topotecan [3].

### REFERENCES

Product Data Sheet  
- Inhibitors  
- Agonists  
- Screening Libraries

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