Product Name: PSI
CAS Number: 158442-41-2
IUPAC Name: N-[(Phenylmethoxy)carbonyl]-L-isoleucyl-L-a-glutamyl-tert-butyl ester-N-[(1S)-1-formyl-3-methylbutyl]-L-alaninamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{32}\text{H}_{50}\text{N}_{4}\text{O}_{8}\cdot0.3\text{H}_{2}\text{O} \)
Batch Molecular Weight: 624.78
Physical Appearance: White solid
Solubility: DMSO to 30 mM
Storage: Store at -20°C

2. ANALYTICAL DATA

HPLC: Shows 92.1% purity
Microanalysis:

<table>
<thead>
<tr>
<th></th>
<th>Carbon</th>
<th>Hydrogen</th>
<th>Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>61.58</td>
<td>8.17</td>
<td>8.98</td>
</tr>
<tr>
<td>Found</td>
<td>61.62</td>
<td>8.3</td>
<td>9</td>
</tr>
</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Tocris Bioscience is an R&D Systems company

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www.RnDSystems.com
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**CAS Number:** 158442-41-2

**IUPAC Name:** \( N-[(\text{Phenylmethoxy})\text{carbonyl}]\text{-L-isoleucyl-L-a-glutamyl-} \text{tert-butyl ester}-N-[(1S)-1\text{-formyl-3-methylbutyl}]\text{-L-alaninamide} \)

**Description:**
Proteasome inhibitor; inhibits chymotrypsin-like activity of the proteasome. Causes dopaminergic cell death in vitro. Prevents activation of NF-κB in response to TNF-α and okadaic acid (Cat. No. 1136) by inhibiting IκB-α degradation. Also inhibits NO production by LPS-activated macrophages.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** \( C_{32}H_{50}N_{4}O_{8} \cdot 0.3H_2O \)
- **Batch Molecular Weight:** 624.78
- **Physical Appearance:** White solid
- **Minimum Purity:** >90%
- **Batch Molecular Structure:**

![Batch Molecular Structure](image)

**Storage:** Store at -20°C

**Solubility & Usage Info:**
DMSO to 30 mM

**Stability and Solubility Advice:**
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

- **SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.
- **SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

- **Tranekner et al** (1994) A proteasome inhibitor prevents activation of NF-κB and stabilizes a newly phosphorylated form of IκB-α that is still bound to NF-κB. EMBO J. 13 5433. PMID: 7957109.