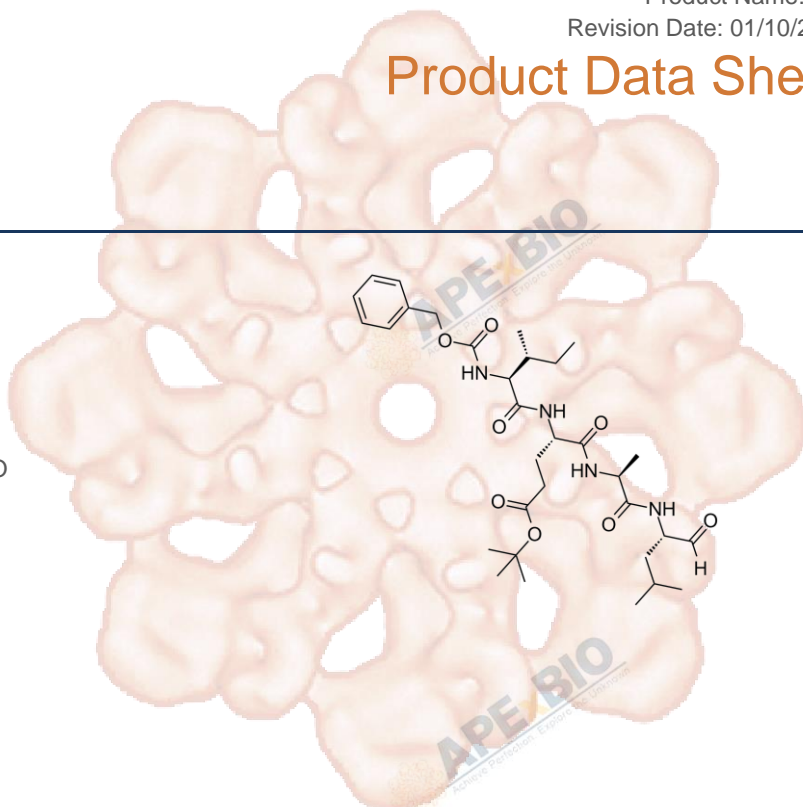


# Product Data Sheet

## PSI

|                  |                             |
|------------------|-----------------------------|
| <b>Cat. No.:</b> | A1900                       |
| <b>CAS No.:</b>  | 158442-41-2                 |
| <b>Formula:</b>  | C32H50N4O8                  |
| <b>M.Wt:</b>     | 618.76                      |
| <b>Synonyms:</b> | Z-Ile-Glu(OtBu)-Ala-Leu-CHO |
| <b>Target:</b>   | Ubiquitination/ Proteasome  |
| <b>Pathway:</b>  | Proteasome                  |
| <b>Storage:</b>  | Store at -20°C              |



## Solvent & Solubility

≥30.6 mg/mL in DMSO; insoluble in H<sub>2</sub>O; ≥48.7 mg/mL in EtOH

In Vitro

| Preparing Stock Solutions | Solvent       |  | Mass      |           |            |
|---------------------------|---------------|--|-----------|-----------|------------|
|                           | Concentration |  | 1mg       | 5mg       | 10mg       |
|                           | 1 mM          |  | 1.6161 mL | 8.0807 mL | 16.1614 mL |
|                           | 5 mM          |  | 0.3232 mL | 1.6161 mL | 3.2323 mL  |
|                           | 10 mM         |  | 0.1616 mL | 0.8081 mL | 1.6161 mL  |

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

## Biological Activity

Shortsummary

Proteasome inhibitor

IC<sub>50</sub> & Target

### Cell Viability Assay

In Vitro

|                      |   |
|----------------------|---|
| Cell Line:           | STAV-AB and STAV-FCS cells  |
| Preparation method:  | The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |
| Reacting conditions: | IC <sub>50</sub> : 4.01µM for STAV-AB, 24 hours 16.31µM for STAV-FCS, 24 hours  |

|         |                          |  |
|---------|--------------------------|--|
|         | Applications:            | Treatment with PSI reduced the viability of the two MM cell sub-lines to different extents in a time and concentration-dependent manner. Thus exposure to PSI for 24 h resulted in an IC50 of 4.01 μM on STAV-AB cells, but 16.31 μM of the same drug was needed for a similar reduction in cell numbers on STAV-FCS cells.  |
| In Vivo | <b>Animal experiment</b> |  |
|         | Animal models:           | Male Sprague-Dawley adult rats   |
|         | Dosage form:             | Subcutaneous injection, 6.0 mg/kg  |
|         | Applications:            | The effects of PSI treatment on the amount of dopamine and the dopamine metabolite DOPAC in the striata, were evaluated by HPLC analysis. Decreased levels of DA in the striatum were found at 6 weeks after the end of PSI treatment as compared to controls; a decrement was also observed in the level of DOPAC in the PSI-treated rats, but did not reach statistical significance. DOPAC/DA ratio was unchanged in the PSI-treated rats as compared to controls, highlighting that reduction of DA level in the striatum of PSI treated rats was not attributable to increased DA metabolism. |
|         | Other notes:             | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.   |

## Product Citations

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

[1] Sun X, Gulyás M, Hjerpe A, et al. Proteasome inhibitor PSI induces apoptosis in human mesothelioma cells. Cancer letters, 2006, 232(2): 161-169.

[2] Pizzi S D, Rossi C, Di Matteo V, et al. Morphological and metabolic changes in the nigro-striatal pathway of synthetic proteasome inhibitor (PSI)-treated rats: a MRI and MRS study. PloS one, 2013, 8(2): e56501.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for

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long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



**APExBIO Technology**

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