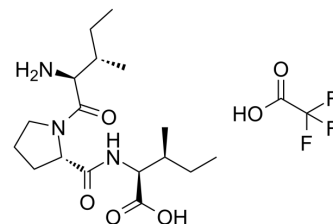


## Diprotin A TFA

**Cat. No.:** HY-111174A  
**CAS No.:** 209248-71-5  
**Molecular Formula:** C<sub>19</sub>H<sub>32</sub>F<sub>3</sub>N<sub>3</sub>O<sub>6</sub>  
**Molecular Weight:** 455.47  
**Target:** Dipeptidyl Peptidase  
**Pathway:** Metabolic Enzyme/Protease  
**Storage:** Sealed storage, away from moisture  
 Powder -80°C 2 years  
 -20°C 1 year

\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 77.5 mg/mL (170.15 mM)  
 \* "≥" means soluble, but saturation unknown.

|                              | Solvent<br>Concentration | Mass | 1 mg      | 5 mg       | 10 mg      |
|------------------------------|--------------------------|------|-----------|------------|------------|
|                              |                          |      |           |            |            |
| Preparing<br>Stock Solutions | 1 mM                     |      | 2.1955 mL | 10.9777 mL | 21.9553 mL |
|                              | 5 mM                     |      | 0.4391 mL | 2.1955 mL  | 4.3911 mL  |
|                              | 10 mM                    |      | 0.2196 mL | 1.0978 mL  | 2.1955 mL  |

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

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 100 mg/mL (219.55 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

|                                     |                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>                  | Diprotin A TFA (Ile-Pro-Ile TFA) is an inhibitor of dipeptidyl peptidase IV (DPP-IV) <sup>[1]</sup> .                                                                                                                                                                                                                                                                           |
| <b>IC<sub>50</sub> &amp; Target</b> | DPP-IV <sup>[1]</sup> .                                                                                                                                                                                                                                                                                                                                                         |
| <b>In Vitro</b>                     | Diprotin A increases the phosphorylation of Src and vascular endothelial-cadherin (VE-cadherin) in human endothelial cells and disrupts endothelial cell-to-cell junctions, which are attenuated by CXCR4 (receptor of SDF-1α)-blocker or Src-inhibitor <sup>[1]</sup> .<br><br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| <b>In Vivo</b>                      | In the model of retinopathy of prematurity, Diprotin A increases not only retinal vascularity but also leakage. Additionally, in the murine diabetic retinopathy model, Diprotin A increases the phosphorylation of Src and VE-cadherin and aggravates                                                                                                                          |

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vascular leakage in the retinas. Collectively, Diprotin A induces vascular leakage by augmenting the SDF-1 $\alpha$ /CXCR4/Src/VE-cadherin signaling pathway<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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[1]. Lee CS, et al. Dipeptidyl Peptidase-4 Inhibitor Increases Vascular Leakage in Retina through VE-cadherin Phosphorylation. Sci Rep. 2016 Jul 6;6:29393.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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