

## Product Datasheet

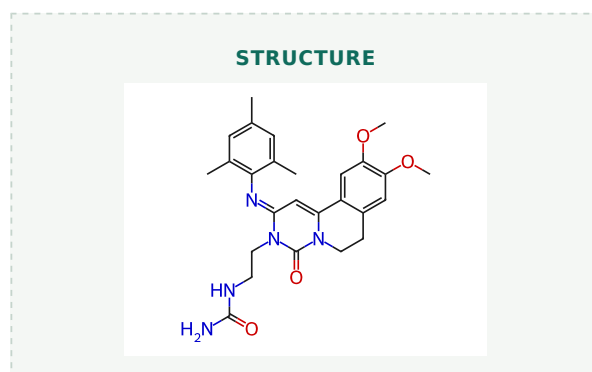
# Ensifentrine

Catalog No. **BP-01946** · CAS **1884461-72-6** · Form **free base** · Physical state **solid** · Color **Light yellow to green yellow** · Version **1.0** · Revision **2026-09-02**

**FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.**

|                                          |                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------|
| Target<br><b>Phosphodiesterase (PDE)</b> | Research area<br><b>Infection; Neurological Disease; Inflammation/Immunology; Cancer</b> |
|------------------------------------------|------------------------------------------------------------------------------------------|

|                   |                                                               |
|-------------------|---------------------------------------------------------------|
| Molecular formula | <b>C<sub>26</sub>H<sub>31</sub>N<sub>5</sub>O<sub>4</sub></b> |
| Molecular weight  | <b>477.5554</b>                                               |



## DESCRIPTION

Ensifentrine (RPL554) is an inhaled first-in-class dual inhibitor of phosphodiesterase 3 (PDE3) and PDE4 with IC50s of 0.4 nM and 1479 nM, respectively.

## BIOLOGICAL ACTIVITY

Ensifentrine (RPL-554) is an inhaled first-in-class dual inhibitor of phosphodiesterase 3 (PDE3) and PDE4 with IC50s of 0.4 nM and 1479 nM, respectively. Ensifentrine has bronchoprotective and anti-inflammatory activities. Ensifentrine can be used for chronic obstructive pulmonary disease (COPD) research.

## SOLUBILITY

Soluble in DMSO 5 mg/mL

## REFERENCES

- [1]. Victoria Boswell-Smith, et al. The pharmacology of two novel long-acting phosphodiesterase 3/4 inhibitors, RPL554 [9,10-dimethoxy-2(2,4,6-trimethylphenylimino)-3-(n-carbamoyl-2-aminoethyl)-3,4,6,7-tetrahydro-2H-pyrimido[6,1-a]isoquinolin-4-one] and RPL565 [6,7-dihydro-2-(2,6-diisopropylphenoxy)-9,10-dimethoxy-4H-pyrimido[6,1-a]isoquinolin-4-one]. J Pharmacol Exp Ther. 2006 Aug;318(2):840-8.
- [2]. Henrik Watz, et al. Symptom Improvement Following Treatment with the Inhaled Dual Phosphodiesterase 3 and 4 Inhibitor Ensifentrine in Patients with Moderate to Severe COPD - A Detailed Analysis. Int J Chron Obstruct Pulmon Dis. 2020 Sep 16;15:2199-2206.
- [3]. Anzueto A, et al. Ensifentrine, a Novel Phosphodiesterase 3 and 4 Inhibitor for the Treatment of Chronic Obstructive Pulmonary Disease: Randomized, Double-Blind, Placebo-controlled, Multicenter Phase III Trials (the ENHANCE Trials). Am J Respir Crit Care Med. 2023 Aug 15;208(4):406-416.

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Lot CoA and SDS are separate documents.