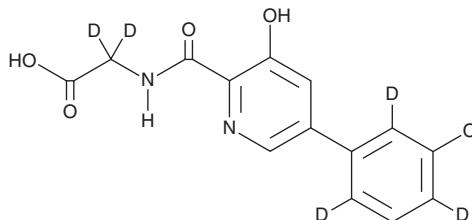


PRODUCT INFORMATION



Vadadustat-d₅ Item No. 45871

CAS Registry No.: 2229917-78-4
Formal Name: N-[[5-(3-chlorophenyl-2,4,6-d₃)-3-hydroxy-2-pyridinyl]carbonyl]-glycine-2,2-d₂
MF: C₁₄H₆ClD₅N₂O₄
FW: 311.7
Chemical Purity: ≥95% (Vadadustat)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 1 mg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Vadadustat-d₅ is intended for use as an internal standard for the quantification of vadadustat (Item No. 15295) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

Vadadustat is an inhibitor of hypoxia-inducible factor prolyl hydroxylase 1 (HIF-PH1), HIF-PH2, and HIF-PH3 (K_s = 0.19, 0.26, and 0.56 nM, respectively).¹ It stabilizes HIF-1α and HIF-2α in Hep3B cells and human umbilical vein endothelial cells (HUVECs). Vadadustat selectively induces erythropoietin (EPO) over VEGF secretion in Hep3B cells. It increases red blood cell indices in a 5/6 nephrectomy-induced rat model of chronic kidney disease when administered at a dose of 90 mg/kg. Vadadustat (40 μM) inhibits proliferation in the mixed lymphocyte reaction in isolated human peripheral blood mononuclear cells (PBMCs).² Formulations containing vadadustat have been used in the treatment of anemia in patients with chronic kidney disease.

References

1. Zuk, A., Si, Z., Loi, S., *et al.* Preclinical characterization of vadadustat (AKB-6548), an oral small molecule hypoxia-inducible factor prolyl-4-hydroxylase inhibitor, for the potential treatment of renal anemia. *J. Pharmacol. Exp. Ther.* **383**(1), 11-24 (2022).
2. Zielniok, K., Burdzinska, A., Kaleta, B., *et al.* Vadadustat, a HIF prolyl hydroxylase inhibitor, improves immunomodulatory properties of human mesenchymal stromal cells. *Cells* **9**(11), 2396 (2020)..

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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