# Data Sheet

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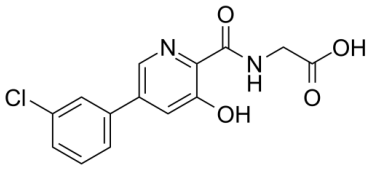
| **Product Name:** | Vadadustat |
| **Cat. No.:** | CS-6373 |
| **CAS No.:** | 1000025-07-9 |
| **Molecular Formula:** | C14H11ClN2O4 |
| **Molecular Weight:** | 306.70 |
| **Target:** | HIF/HIF Prolyl-Hydroxylase |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Solubility:** | DMSO : ≥ 100 mg/mL (326.05 mM) |




## BIOLOGICAL ACTIVITY:

Vadadustat is a novel, titratable, oral hypoxia-inducible factor prolyl hydroxylase (**HIF-PH**) inhibitor in development for the treatment of anemia. **In Vitro:** Vadadustat induces endogenous erythropoietin synthesis and enhances iron mobilization. Vadadustat is well-tolerated in healthy volunteers and patients with chronic kidney disease, where it increases reticulocytes, plasma EPO, and Hb levels in a dose-dependent manner. The increase in plasma EPO levels seen with vadadustat is comparable in magnitude to that occurring physiologically at moderate altitude and shows a normal diurnal pattern with a return to baseline levels prior to the next dose. Vadadustat improves iron homeostasis by decreasing hepcidin and increasing transferrin levels. once-daily oral administration of vadadustat, titrated to increase and maintain Hb in the target range, may provide multiple advantages over conventional ESAs[1]. Vadadustat is observed to have a half-life of approximately 4.5 hours. Overall, patients demonstrate an increase in Hb levels, from 9.91 g/dL at baseline to 10.54 g/dL by day 29. Ferritin levels decrease from 334.1 ng/mL at baseline to 271.7 ng/mL by day 29[2].

## References:

[1]. Pergola PE, et al. Vadadustat, a novel oral HIF stabilizer, provides effective anemia treatment in nondialysis-dependent chronic kidney disease. Kidney Int. 2016 Nov;90(5):1115-1122.

[2]. Gupta N, et al. Hypoxia-Inducible Factor Prolyl Hydroxylase Inhibitors: A Potential New Treatment for Anemia in Patients With CKD. Am J Kidney Dis. 2017 Feb 24. pii: S0272-6386(17)30110-5.

## CAIndexNames:

Glycine, N-[[5-(3-chlorophenyl)-3-hydroxy-2-pyridinyl]carbonyl]-

## SMILES:

O=C(O)CNC(C1=NC=C(C2=CC=CC(Cl)=C2)C=C1O)=O

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

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