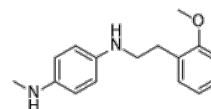


Product Name : KDS12025
Cat. No. : PC-25434
CAS No. : 2769053-56-5
Molecular Formula : C₁₆H₂₀N₂O
Molecular Weight : 256.35
Target : Other Targets
Solubility : 10 mM in DMSO



CAS: 2769053-56-5

Biological Activity

KDS12025 is a specific, BBB-permeable small molecule that enhances **hemoglobin (Hb) pseudoperoxidase** activity 100-fold (EC₅₀=0.04 μM), enabling effective H₂O₂ decomposition even at extremely low Hb levels. KDS12025 does not degrade H₂O₂ without Hb, and not affect other peroxidases. KDS12025 also exhibits efficacy comparable to that of mouse Hb. KDS12025 decreased Hb EC₅₀ for H₂O₂ decomposition by 4.7-fold and EC₂₀ by 98-fold. KDS12025 potently enhances Hb pseudoperoxidase activity without altering its respiratory function or metabolism in mice. KDS12025 effectively reduces AD- and PD-like pathology in vitro, KDS12025 (10 μM) significantly reduced Aβ-induced H₂O₂ with an EC₅₀ of 0.5 μM. KDS12025 effectively mitigates Aβ-, MAOB-, and 6-OHDA-associated H₂O₂ levels in cultured astrocytes. KDS12025 (3 mg/kg/day (mpk)) significantly improved memory impairment, restored astrogliosis, and normalized aberrant tonic GABA currents in APP/PS1 mouse model. KDS12025 effectively and potently reverses key AD pathological features, including neurodegeneration, astrogliosis, oxidative stress, and memory impairment.

References

Won W, et al. *Signal Transduct Target Ther.* 2025 Aug 22;10(1):270.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

E-mail: tech@probechem.com