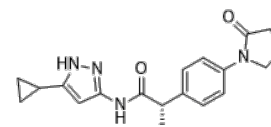


Product Name : (S)-PHA533533
Cat. No. : PC-22640
CAS No. : 437982-89-3
Molecular Formula : C₁₉H₂₂N₄O₂
Molecular Weight : 338.41
Target : Other Targets
Solubility : 10 mM in DMSO



CAS: 437982-89-3

Biological Activity

(S)-PHA533533 is a potent, small molecule unsilencer of paternal **UBE3A** in mouse primary neurons with EC₅₀ of 0.54 μM, E_{max}=80%, effectively downregulates Ube3a-ATS/UBE3A ATS and epigenetically unsilences paternal Ube3a/UBE3A in both mouse and human neuron.

(S)-PHA533533 is a compound previously developed as a cyclin-dependent kinase 2 (**CDK2**) inhibitor.

(S)-PHA533533 downregulate a long non-coding anti sense (UBE3A-ATS) transcript and unsilences paternal Ube3a in primary neurons derived from AS model mice (Ube3a^{m-/-}/p+).

(S)-PHA533533 downregulated the Ube3a-ATS similarly to topotecan, significantly increased Ube3a mRNA and protein levels in WT neurons.

The unsilencing of paternal Ube3a by (S)-PHA533533 occurs independently from its known CDK2/CKD5 targets and topoisomerase I inhibition.

Peripheral delivery of (S)-PHA533533 (2mg/kg) can produce brain-wide unsilencing of paternal Ube3a in AS model mice.

(S)-PHA533533 reduces the expression on UBE3A ATS in human ASdel1-0ΔI-P neurons with IC₅₀ of 0.42 μM, EC₅₀ of 0.59 μM for for unsilencing paternal UBE3A.

(S)-PHA533533 downregulates the UBE3A antisense (UBE3A-ATS) transcript and increases paternal UBE3A mRNA in neurons derived from patients with Angelman syndrome.

References

Vihma H, et al. *Nat Commun.* 2024 Jul 8;15(1):5558.

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

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