Product Datasheet

URB597

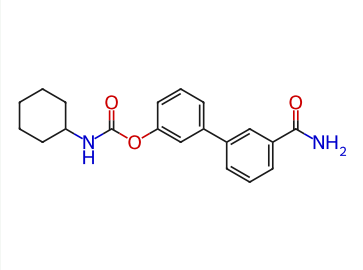
Catalog No. **BP-02128** · CAS **546141-08-6** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-03**

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

Target	Research area
FAAH; Autophagy; Mitophagy	**Neurological Disease**

Molecular formula	$C_{20}H_{22}N_2O_3$
Molecular weight	**338.4003**

STRUCTURE



DESCRIPTION

URB-597 (KDS-4103) is an orally bioavailable and selective FAAH inhibitor. URB-597 inhibits FAAH activity with an IC50s of approximately 5 nM in rat brain membranes, 0.5 nM in intact rat neurons, 3 nM in human liver microsomes. Antidepressant-like effects. Analgesic activity .

BIOLOGICAL ACTIVITY

In Vitro

URB-597 (KDS-4103) prevents the FAAH-catalyzed hydrolysis of [3H]anandamide by primary cultures of rat cortical neurons with an IC50 value of ~0.50 nM.

In Vivo

URB-597 (KDS-4103) inhibits rat brain FAAH activity after intraperitoneal (i.p.) administration with a median inhibitory dose (ID50) of 0.15 mg/kg in wild-type mice (+/+) or FAAH-null mice (-/-).

KDS-4103 (0.1-0.3 mg/kg, i.p.) elicits significant, anxiolytic-like, antidepressant-like and analgesic effects, which are prevented by treatment with CB1 receptor antagonists in rats and mice.

KDS-4103 is orally available in rats and cynomolgus monkeys.

URB-597 inhibits FAAH in the brain rapidly (1 h), sustains at >90% through 12 h and >60% through 24 h after an oral dose of 10 mg/kg.

SOLUBILITY

Soluble in DMSO/H2O

REFERENCES

[1].Daniele Piomelli, et al. Pharmacological profile of the selective FAAH inhibitor KDS-4103 (URB597). CNS Drug Rev. Spring 2006;12(1):21-38.