

Product Datasheet

Alogabat

Catalog No. **BP-00042** · CAS **2230009-48-8** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-15**

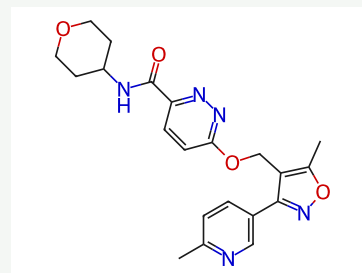
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Target GABA Receptor	Research area Neurological Disease
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Molecular formula **C₂₁H₂₃N₅O₄**

Molecular weight **409.4384**

STRUCTURE



DESCRIPTION

Alogabat is a positive allosteric modulator (PAM) and agonist ($K_i < 100$ nM) of the GABA α 5 receptor, targeting the $\alpha 5\beta 3\gamma 2$ subunit with a K_i of 8.7 nM. Alogabat increases the expression level of $\alpha 5\beta 3\gamma 2$ in oocytes (1.97-fold). GABA α 5 has been implicated in cognitive impairment associated with central nervous system (CNS) disorders, brain cancer (including brain tumors such as medulloblastoma), and can be used in the study of mild cognitive impairment (MCI), amnesic MCI (aMCI), age-associated memory impairment (AAMI), age-related cognitive decline (ARCD), dementia, Alzheimer's disease (AD), prodromal AD, post-traumatic stress disorder (PTSD), schizophrenia, bipolar disorder, amyotrophic lateral sclerosis (ALS), cognitive impairment associated with cancer treatment, mental retardation, Parkinson's disease (PD), autism spectrum disorder, fragile X, Rett syndrome, obsessive-compulsive behavior, and substance addiction.

BIOLOGICAL ACTIVITY

In Vitro

Alogabat (compound 8) binds selectively to the $\alpha 5$ subunit over $\alpha 1$, $\alpha 2$, and $\alpha 3$. The K_i in HEK293 cells is 8.7 nM (hGABA-A $\alpha 5\beta 3\gamma 2$).

Alogabat ($30 \times K_i = 261$ nM, transient) potently enhances GABA-evoked currents in oocytes with an efficiency of 97% to elicit 20% of the maximal current response (EC₂₀).

SOLUBILITY

Soluble in DMSO

In vitro DMSO : 33.33 mg/mL

REFERENCES

[1]. Bernd Buettelmann, et al. Preparation of new isoxazolyl ether derivatives as GABAA α 5 receptor positive allosteric modulators (PAMs). World Intellectual Property Organization, WO2018104419 A1 2018-06-14.

[2]. Belew Mekonnen, et al. Benzazepine derivatives for the treatment of cognitive impairment and their preparation. World Intellectual Property Organization, WO2024039886 A1 2024-02-22.

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