

Product Datasheet

LTGO-33

Catalog No. **BP-02262** · CAS **2834106-06-6** · Form **free base** · Physical state **other** · Color **Off-white to light yellow** · Version **1.0** · Revision **2026-09-04**

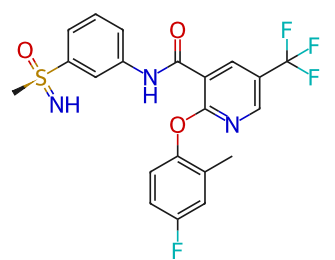
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Target Sodium Channel	Research area Neurological Disease
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Molecular formula **C₂₁H₁₇F₄N₃O₃S**

Molecular weight **467.4370**

STRUCTURE



DESCRIPTION

LTGO-33 is a potent and selective voltage-gated sodium channel NaV1.8 inhibitor. LTGO-33 inhibits NaV1.8 in the nM potency range and exhibits over 600-fold selectivity against human NaV1.1-NaV1.7 and NaV1.9.

BIOLOGICAL ACTIVITY

In Vitro

LTGO-33 exhibits an IC₅₀ of 33 nM from the closed state and 24 nM from an inactivated state.

LTGO-33 displays species specificity for primate NaV1.8 over dog and rodent NaV1.8 and inhibits action potential firing in human dorsal root ganglia neurons.

LTGO-33 inhibits TTX-R currents in primary DRG neurons from human (male donors: IC₅₀ of 110 nM, 95% CI: 92 to 120 nM, n = 3-15 neurons per concentration; female donors: IC₅₀ of 120 nM, 95% CI: 100 to 140 nM, 4-6 neurons per concentration) and cynomolgus monkey (IC₅₀ of 100 nM, 95% CI: 71 to 150 nM, n = 6 cells) but is markedly less effective on DRG neurons from dog (IC₅₀ >10 μM, n = 6 cells), rat (IC₅₀ >30 μM, n = 7 cells), and mouse (IC₅₀ >30 μM, n = 8 cells).

LTGO-33 stabilizes the deactivated state of VSDII, effectively keeping the channel closed by preventing movement of VSDII.

SOLUBILITY

Soluble in DMSO

In vitro DMSO : 100 mg/mL

REFERENCES

[1]. Gilchrist JM, et al. Pharmacologic Characterization of LTGO-33, a Selective Small Molecule Inhibitor of the Voltage-Gated Sodium Channel NaV1.8 with a Unique Mechanism of Action. Mol Pharmacol. 2024 Feb

15;105(3):233-249.

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Lot CoA and SDS are separate documents.