

PRODUCT INFORMATION

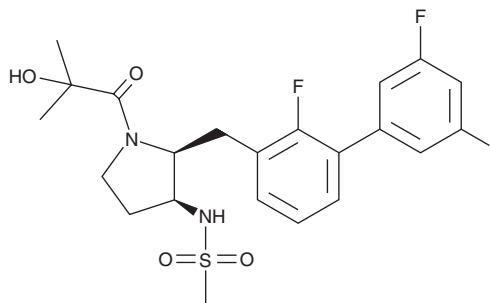


TAK-994

Item No. 42336

CAS Registry No.: 2274802-95-6
Formal Name: N-[(2S,3S)-1-(2-hydroxy-2-methyl-1-oxopropyl)-2-[(2,3',5'-trifluoro[1,1'-biphenyl]-3-yl)methyl]-3-pyrrolidinyl]-methanesulfonamide

Synonym: Firazorexton
MF: C₂₂H₂₅F₃N₂O₄S
FW: 470.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TAK-994 is supplied as a solid. A stock solution may be made by dissolving the TAK-994 in the solvent of choice, which should be purged with an inert gas. TAK-994 is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

TAK-994 is an orexin receptor 2 (OX2R) agonist.^{1,2} It selectively induces calcium mobilization in CHO-K1 cells expressing human OX2R over those expressing OX1R (EC₅₀s = 0.019 and 14 μM, respectively).¹ TAK-994 is also selective for OX2R over a panel of 106 enzymes, receptors, and ion channels at 10 μM. *In vivo*, TAK-994 (3 mg/kg) increases wakefulness time and wakefulness episode duration and inhibits chocolate-induced cataplexy-like episodes during the active phase in a model of narcolepsy using mice with orexin neurons ablated by ataxin-3 expression. It increases wakefulness time but does not affect orexin A (OXA) or OXB cerebrospinal fluid (CSF) levels during the sleep phase in cynomolgus monkeys when administered at a dose of 10 mg/kg.²

References

1. Ishikawa, T., Hara, H., Kawano, A., *et al.* TAK-994, a novel orally available brain-penetrant orexin 2 receptor-selective agonist, suppresses fragmentation of wakefulness and cataplexy-like episodes in mouse models of narcolepsy. *J. Pharmacol. Exp. Ther.* **385**(3), 193-204 (2023).
2. Yamada, R., Narita, N., Ishikawa, T., *et al.* The orexin receptor 2 (OX2R)-selective agonist TAK-994 increases wakefulness without affecting cerebrospinal fluid orexin levels in cynomolgus monkeys. *Pharmacol. Biochem. Behav.* **234**, 173690 (2024).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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