
Product Data Sheet

Product Name: Centanafadine (EB-1020)

Cat. No.: GC31283

Chemical Properties

Cas. No. 924012-43-1

SMILES [C@@H]12[C@@](CNC2)(C3=CC(C=CC=C4)=C4C=C3)C1

Formula C₁₅H₁₅N M.Wt 209.29

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

Centanafadine is dual norepinephrine (NE)/dopamine (DA) transporter inhibitor, also inhibits serotonin transporter, with IC₅₀s of 6 nM, 38 nM and 83 nM for human NE, DA and serotonin transporter, respectively.

Centanafadine (EB-1020) preferentially inhibits monoamine reuptake in cloned cell lines transfected with human transporters with IC₅₀ values of 6 and 38 nM, respectively, for NE and DA transporters, Centanafadine has lesser effects on 5-HT transporter as it inhibits the reuptake of 5-HT with an IC₅₀ value of 83 nM [1].

In microdialysis studies, Centanafadine markedly increases NE, and DA concentrations levels in rat prefrontal cortex in vivo with peak increases of 375 and 300%, respectively with the greatest effects on NE, and also increases DA extracellular concentrations in the striatum to 400% of baseline concentrations. Behavioral studies demonstrate that Centanafadine dose-dependently decreases immobility in the mouse tail suspension test of depression to 13% of control levels, and do not stimulate locomotor activity in adult rats in the optimal dose range. Centanafadine dose-dependently inhibits locomotor hyperactivity in juvenile rats lesioned with the neurotoxin 6-hydroxydopamine (100 µg

Caution: Product has not been fully validated for medical applications. For research use only.

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intracisternally) as neonates; a well-established animal model for attention-deficit hyperactivity disorder (ADHD)[1].

[1]. Bymaster FP, et al. Pharmacological characterization of the norepinephrine and dopamine reuptake inhibitor EB-1020: implications for treatment of attention-deficit hyperactivity disorder. *Synapse*. 2012 Jun;66(6):522-32.

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