

Tirasemtiv

Catalog No: tcsc2783



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

1005491-05-3

Formula:

$C_{12}H_{14}N_4O$

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 52 mg/mL (225.82 mM)

Alternative Names:

CK-2017357

Observed Molecular Weight:

230.27

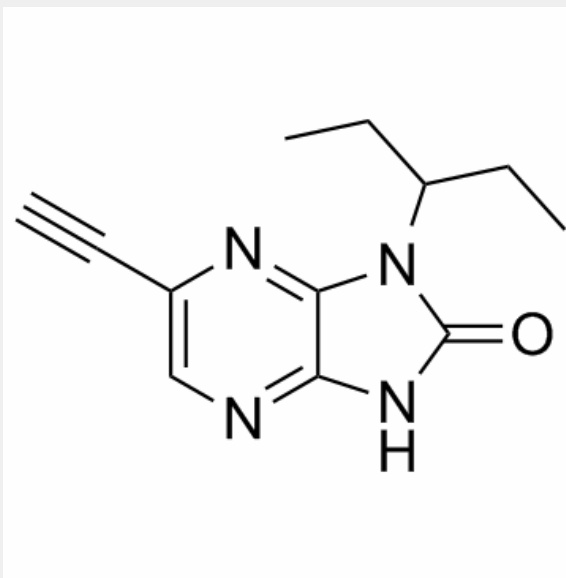
Product Description

Tirasemtiv is an activator of the fast skeletal muscle troponin complex.

IC50 & Target: Troponin^[1]

In Vitro: Tirasemtiv is a fast skeletal troponin activator that sensitizes the sarcomere to calcium; this mechanism of action amplifies the response of muscle to neuromuscular input producing greater force when nerve input is reduced. Tirasemtiv selectively sensitizes fast skeletal muscle troponin to calcium (Ca^{2+}), and slows the rate of Ca^{2+} release from the regulatory troponin complex of fast skeletal muscle^[1].

In Vivo: A single dose of Tirasemtiv significantly increases submaximal isometric force, forelimb grip strength, grid hang time, and rotarod performance in a female transgenic mouse model (B6SJL-SOD1^{G93A}) of ALS with functional deficits. Additionally, diaphragm force and tidal volume are significantly higher in Tirasemtiv-treated female B6SJL-SOD1^{G93A} mice. At the 25% deficit milestone, vehicle-treated B6SJL-SOD1^{G93A} mice demonstrated forelimb grip strength of 49.6 ± 4.6 g. Tirasemtiv increases grip strength by 38% to 68.6 ± 8.1 g (pG93A mice (WT p[1]).



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!