

# Acoziborole

**Catalog No: tcsc0016944**



## Available Sizes

**Size:** 1mg

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

1266084-51-8

**Formula:**

$C_{17}H_{14}BF_4NO_3$

**Pathway:**

Anti-infection

**Target:**

Parasite

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 125$  mg/mL (340.51 mM)

**Alternative Names:**

SCYX-7158;AN5568

**Observed Molecular Weight:**

367.1

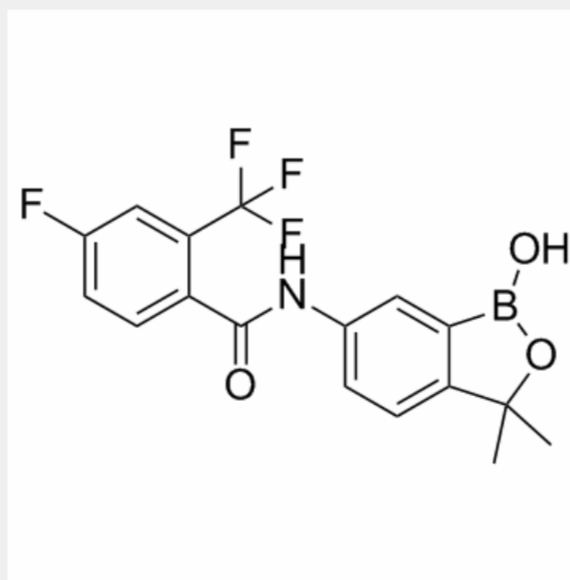
**Product Description**

SCYX-7158 is an effective, safe and orally active treatment for human african trypanosomiasis (**HAT**). In the ***T. b. brucei*** S427 strain, the **MIC** value for SCYX-7158 is 0.6 µg/mL.

IC50 & Target: MIC: SCYX-7158 (*T. b. brucei* S427 strain)<sup>[1]</sup>

**In Vitro:** SCYX-7158 is active in vitro against relevant strains of *Trypanosoma brucei*, including *T. b. rhodesiense* and *T. b. gambiense*. In whole cell assays, SCYX-7158 exhibits potent activity against representative *T. b. brucei*, *T. b. rhodesiense* and *T. b. gambiense* strains. IC<sub>50</sub> values for SCYX-7158 are approximately 0.07 µg/mL to 0.37 µg/mL following incubation of the parasite strains with SCYX-7158 for 72 h. In the *T. b. brucei* S427 strain, the MIC value for SCYX-7158 is 0.6 µg/mL, approximately two times the IC<sub>50</sub> measured for this strain. In contrast to the potent activity of SCYX-7158 against trypanosomes, no significant inhibition of cell proliferation is observed in an in vitro mammalian cell (L929 mouse cell line) assay at drug concentrations up to 50 µg/mL. The potential for SCYX-7158 to inhibit cytochrome P450 (CYP) enzymes is evaluated using P450-Glo assays for the human isoforms CYP3A4, CYP1A2, CYP2C19, CYP2C9 and CYP2D6. The IC<sub>50</sub> values for SCYX-7158 in these assays are all above 10 µM<sup>[1]</sup>.

**In Vivo:** In uninfected mice, 4.3 mg/kg intravenous dose of SCYX-7158 show an apparent elimination half-life (t<sub>1/2</sub>) of 26.6 h; systemic clearance (CL) of 0.089 L/h/kg; a volume of distribution (Vd<sub>ss</sub>) of 1.69 L/kg and area under the concentration-time curve (AUC<sub>0-24 h</sub>) of 48 h•µg/mL. Following an oral dose of 13.4 mg/kg, which corresponds to the lowest efficacious dose in the murine stage 2 HAT model, SCYX-7158 is rapidly absorbed, as a C<sub>max</sub> of 6.96 µg/mL is achieved in plasma at 6 h after dose, with an oral clearance (Cl/F) value of 0.163 L/h/kg, an AUC<sub>0-24 h</sub> of 82 h•µg/mL and absolute oral bioavailability of 55%. After a 26 mg/kg oral dose, which corresponds to the dose giving a 100% cure rate in the murine stage 2 HAT model, C<sub>max</sub> increases to 9.8 µg/mL and the AUC<sub>0-24 h</sub> is 113 h•µg/mL. In uninfected rats, following oral administration of SCYX-7158 at a nominal dose of 25 mg/kg (dose affording a 100% cure rate in mice), C<sub>max</sub> increases approximately 2 fold more than that in mice (C<sub>max</sub>=18.2 µg/mL) and AUC<sub>0-24 h</sub>, and hence oral clearance, improves approximately 4 fold (AUC<sub>0-24 h</sub> 291 h•µg/mL and Cl/F=0.092 L/kg/h). The time to maximum concentration is similar to that in mice (t<sub>max</sub>=8 h). Uninfected male and female cynomolgus monkeys are treated with SCYX-7158 at 2 mg/kg (IV) on study day 1 and 10 mg/kg (NG) on study day 8. SCYX-7158 exhibits excellent plasma pharmacokinetics, with CL of 0.022 L/h/kg; Vd<sub>ss</sub> of 0.656 L/kg and area under the concentration-time curve 78.8 h•µg/mL, and 94.4 for AUC<sub>0-24 h</sub> and AUC<sub>0-inf</sub> respectively, following intravenous administration<sup>[1]</sup>.



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