Proteins

Product Data Sheet

YTX-465

Molecular Weight:

Cat. No.: HY-124751 CAS No.: 2225824-53-1 Molecular Formula: $C_{25}H_{26}N_6O_3$

Target: Stearoyl-CoA Desaturase (SCD) Pathway: Metabolic Enzyme/Protease 4°C, protect from light Storage:

458.51

* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

SOLVENT & SOLUBILITY

In Vitro

DMSO: 100 mg/mL (218.10 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.1810 mL	10.9049 mL	21.8098 mL
	5 mM	0.4362 mL	2.1810 mL	4.3620 mL
	10 mM	0.2181 mL	1.0905 mL	2.1810 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (5.45 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.45 mM); Clear solution
- 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.45 mM); Clear solution

BIOLOGICAL ACTIVITY

Description YTX-465 is a stearoyl-CoA desaturase (Ole1/SCD) inhibitor. YTX-465 inhibits Ole1 and SCD1 with IC $_{50}$ s of 0.039 μ M and 30.4 μ M and 30. M, respectively. YTX-465 can be used in the research of Parkinson's disease and other synucleinopathies^[1].

IC₅₀ & Target Ole1 SCD1 0.039 μM (IC₅₀) $30.4 \, \mu M \, (IC_{50})$

> YTX-465 (1-10000 nM) has an EC₅₀ value of 0.013 μ M for α -synuclein (α -syn) toxicity rescue^[1]. YTX-465 (0.05 μ M; 0-2 days) rescue the growth of α -Syn-expressing yeast^[1].

> > YTX-465 (0, 10, 40, 160, 640, 2500 nM; 4h) increases the level of Ole1 protein in wild-type yeast expressing OLE1 in a

In Vitro

 $concentration-dependent\ manner,\ that\ indicate\ YTX-465\ induce\ a\ negative\ feedback\ loop {\small [1]}.$

YTX-465 (0, 0.03, 0.09, 0.27, 0.81 μ M; 6 hours) reduces fatty desaturation in a concentration-dependent manner in wild-type yeast, with a 50% reduction in desaturation at 0.03 μ M^[1].

YTX-465 (0.25 μ M; 8 hours) decreases the desaturation index (DI) for all major classes of membrane phospholipids in wild-type yeast^[1].

 $\label{eq:mce} \mbox{MCE has not independently confirmed the accuracy of these methods. They are for reference only.}$

REFERENCES

 $[1]. \ Vincent \ BM, et \ al. \ Inhibiting \ Stearoyl-CoA \ Desaturase \ Ameliorates \ \alpha-Synuclein \ Cytotoxicity. \ Cell \ Rep. \ 2018 \ Dec \ 4;25(10):2742-2754.e31.$

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

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