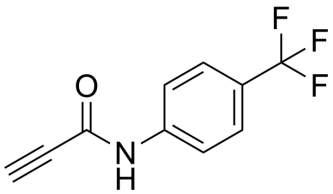
SDH-IN-2

Cat. No.:	HY-148921
CAS No.:	1823354-06-8
Molecular Formula:	$C_{10}H_6F_3NO$
Molecular Weight:	213.16
Target:	Fungal
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (1172.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.6913 mL	23.4566 mL	46.9131 mL
	5 mM	0.9383 mL	4.6913 mL	9.3826 mL
	10 mM	0.4691 mL	2.3457 mL	4.6913 mL

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

BIOLOGICAL ACTIVITY

Description

SDH-IN-2 is a potent succinate dehydrogenase (SDH) inhibitor with an IC_{50} of 0.55 μg/mL. SDH-IN-2 is also an antifungal agent. SDH-IN-2 inhibits phytopathogenic fungia with average EC_{50} values of 3.82-9.81 μg/mL for all the fungi[1]. SDH-IN-2 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

In Vitro

SDH-IN-2 (Compound 13) (200 μg/mL, 7 days) completely inhibits Physalospora piricola infection on apples, and also shows high inhibition rates of 70.9-86.9% on all the fungi even at 20 μg/mL[1].
SDH-IN-2 inhibits P. oryza and F. oxysporum f. sp. niveum with EC_{50}s of 4.33 and 3.56 μg/mL[1].
SDH-IN-2 (0-50 μg/mL) has no effect on the germination rate of bean seeds[1].
SDH-IN-2 (0-100 μg/mL) has no significant effect on the growth of wheat seedlings[1].
SDH-IN-2 inhibits SDH enzymatic activity with an IC_{50} of 0.55 μg/mL[1].
SDH-IN-2 binds well to the ubiquinone-binding region of SDH by hydrogen bonds and undergoes π–alkyl interaction and π-cation interaction[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	SDH-IN-2 (Compound 13) (0-200 μg/mL, 7 days) inhibits the infection of P. piricola on apples[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zhang YH, et al. Discovery of N-Phenylpropiolamide as a Novel Succinate Dehydrogenase Inhibitor Scaffold with Broad-Spectrum Antifungal Activity on Phytopathogenic Fungi. J Agric Food Chem. 2023 Mar 1;71(8):3681-3693.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA