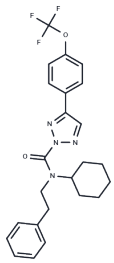
# Data Sheet (Cat.No.T24263)

KLH45

## Chemical Properties



CAS No. : 1632236-44-2

Formula: C24H25F3N4O2

Molecular Weight: 458.48

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

## Biological Description

| | |
|---|---|
| Description | KLH45 is an effective and selective inhibitor of Spastic Paraplegia-Related Triglyceride Hydrolase DDHD2(IC50 = 1.3 nM). |
| Targets(IC50) | Phosphatase |
| In vitro | In Neuro2A cells, KLH45 (25 nM) completely inhibits DDHD2 (>95%)[1]. In fatty acid-supplemented DDHD2-expressing cells, KLH45 (2 μM) increases LD formation and selectively blocks DDHD2 activity[2]. |
| In vivo | KLH45 (20 mg/kg) significantly elevates brain triglycerides in DDHD2−/− mice[1]. |

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: 162 mg/mL (353.34 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (10.91 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.1811 mL | 10.9056 mL | 21.8112 mL |
| 5 mM | 0.4362 mL | 2.1811 mL | 4.3622 mL |
| 10 mM | 0.2181 mL | 1.0906 mL | 2.1811 mL |
| 50 mM | 0.0436 mL | 0.2181 mL | 0.4362 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Jordon M Inloes, et al. The hereditary spastic paraplegia-related enzyme DDHD2 is a principal brain triglyceride lipase. Proc Natl Acad Sci U S A. 2014 Oct 14;111(41):14924-9.
Jordon M Inloes, et al. Functional Contribution of the Spastic Paraplegia-Related Triglyceride Hydrolase DDHD2 to the Formation and Content of Lipid Droplets. Biochemistry. 2018 Feb 6;57(5):827-838.