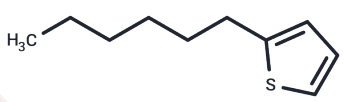
# Data Sheet (Cat.No.T39312)

TargetMol

## 2-Hexylthiophene

### Chemical Properties




CAS No. : 18794-77-9

Formula: C10H16S

Molecular Weight: 168.3

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 | 2-Hexylthiophene, a weakly basic heteroaromatic compound, can enhance the molar absorption coefficient of ruthenium sensitizers by undergoing modification. |
| Targets(IC50) | Others |
| In vitro | By incorporating 2-Hexylthiophene at the 5-position of the terpyridine derivative ligand, an enhancement in the molar absorption coefficient of the ruthenium sensitizer is achieved.[1] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 90 mg/mL (534.76 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: 3.3 mg/mL (19.61 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 | 5.9418 mL | 29.7089 mL | 59.4177 mL |
| 5 mM | 1.1884 mL | 5.9418 mL | 11.8835 mL |
| 10 mM | 0.5942 mL | 2.9709 mL | 5.9418 mL |
| 50 mM | 0.1188 mL | 0.5942 mL | 1.1884 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

Ozawa H, et al. Ruthenium sensitizers with a hexylthiophene-modified terpyridine ligand for dye-sensitized solar cells: synthesis, photo- and electrochemical properties, and adsorption behavior to the TiO2 surface.ACS Appl Mater Interfaces. 2015 Feb 11;7(5):3152-61.