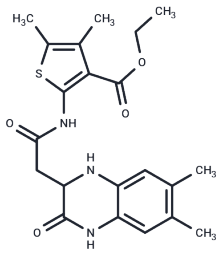
# Data Sheet (Cat.No.T12235)

TargetMol

NMDI14

## Chemical Properties



CAS No. : 307519-88-6

Formula: C21H25N3O4S

Molecular Weight: 415.51

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 | NMDI14 is an inhibitor of nonsense mediated RNA decay (NMD). |
| Targets(IC50) | Others,DNA/RNA Synthesis |
| In vitro | NMDI14 Treating cells with NMDI14 for 6 hours leads to an increase of PTC 39 β globin to 12%, a relative four-fold increase that, if resulting in biologically active hemoglobin, would be sufficient to ameliorate the clinical symptoms of thalassemia[1].NMDI14, an inhibitor of nonsense-mediated mRNA decay (NMD), restored W1282X mRNA to almost 50% of WT levels in the parental NE cells. RNA-seq of the NE cells homozygous for W1282X showed that CFTR transcript level was reduced to 1.7% of WT (p-value: 4.6e-3). Negligible truncated CFTR protein was generated by Flp-In 293 cells stably expressing the W1282X EMG even though CFTR transcript was well above levels observed in the parents and proband. Finally,NMD inhibition improved the stability and response to correctors of W1282X-CFTR protein expressed in the Flp-In-293 cells[2]. |

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: < 1 mg/mL (insoluble),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.4067 mL | 12.0334 mL | 24.0668 mL |
| 5 mM | 0.4813 mL | 2.4067 mL | 4.8134 mL |
| 10 mM | 0.2407 mL | 1.2033 mL | 2.4067 mL |
| 50 mM | 0.0481 mL | 0.2407 mL | 0.4813 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

Martin L, et al. Identification and characterization of small molecules that inhibit nonsense-mediated RNA decay and suppress nonsense p53 mutations. Cancer Res. 2014 Jun 1;74(11):3104-1

Aksit M A , Bowling A D , Evans T A , et al. Decreased mRNA and protein stability of W1282X limits response to modulator therapy[J]. Journal of Cystic Fibrosis, 2019, 18(5).