

CA-4948

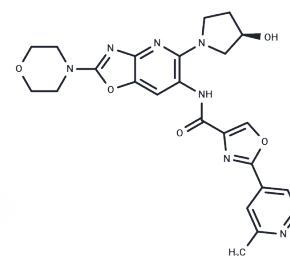
## Chemical Properties

CAS No. : 1801344-14-8

Formula: C<sub>24</sub>H<sub>25</sub>N<sub>7</sub>O<sub>5</sub>

Molecular Weight: 491.5

Storage: Store at low temperature, Keep away from moisture  
 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	CA-4948 (Emavusertib) is a potent IRAK4/FLT3 inhibitor. CA-4948 with anti-tumor activity.
Targets(IC50)	Apoptosis,FLT,NF-κB,IRAK,MyD88
In vitro	CA-4948, demonstrated good cellular activity in ABC DLBCL and AML cell lines. Inhibition of TLR signaling leading to decreased IL-6 levels was also observed in whole blood assays. CA-4948 demonstrated moderate to high selectivity in a panel of 329 kinases as well as exhibited desirable ADME and PK profiles including good oral bioavailability in mice, rat, and dog and showed >90% tumor growth inhibition in relevant tumor models with excellent correlation with in vivo PD modulation. CA-4948 was well tolerated in toxicity studies in both mouse and dog at efficacious exposure. The overall profile of CA-4948 prompted us to select it as a clinical candidate for evaluation in patients with relapsed or refractory hematologic malignancies including non-Hodgkin lymphoma and acute myeloid leukemia[2].

## Solubility Information

Solubility	H <sub>2</sub> O: < 0.1 mg/mL (insoluble), DMSO: 50 mg/mL (101.73 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 5 mg/mL (10.17 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (10.17 mM), Solution. 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (4.07 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.0346 mL	10.1729 mL	20.3459 mL
5 mM	0.4069 mL	2.0346 mL	4.0692 mL
10 mM	0.2035 mL	1.0173 mL	2.0346 mL
50 mM	0.0407 mL	0.2035 mL	0.4069 mL

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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

Wiese MD, et al. Investigational IRAK-4 inhibitors for the treatment of rheumatoid arthritis. *Expert Opin Investig Drugs*. 2020 Apr 17:1-8.

Bhumireddy A . Discovery of CA-4948, an Orally Bioavailable IRAK4 Inhibitor for Treatment of Hematologic Malignancies[J]. *Chemistry Letters*, 2020, 11(12).

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