

## BRD4/CK2-IN-1

## Chemical Properties

CAS No. : 2756851-99-5

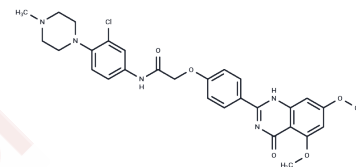
Formula: C<sub>29</sub>H<sub>30</sub>ClN<sub>5</sub>O<sub>5</sub>

Molecular Weight: 564.03

Store at low temperature

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	BRD4/CK2-IN-1 is a small molecule inhibitor targeting BRD4 and CK2, with an IC <sub>50</sub> of 180nM for BRD4 and 230nM for CK2. It inhibits the proliferation of MDA-MB-231 and MDA-MB-468 cells, inducing apoptosis and autophagy-related cell death. It can be used in triple-negative breast cancer research.
Targets(IC <sub>50</sub> )	Apoptosis,Epigenetic Reader Domain,Casein Kinase,Autophagy
In vitro	BRD4/CK2-IN-1 showed significant inhibitory activity against BRD4 (IC <sub>50</sub> = 180 nM). BRD4/ CK2-in-1 showed significant inhibitory activity against CK2 (IC <sub>50</sub> = 230 nM). BRD4/ CK2-in-1 induces TNBC cell death by targeting BRD4 and CK2. BRD4/ CK2-in-1 can bind to BRD4 and CK2 IN cells and inhibit BRD4 and CK2-regulated proliferation pathways, but has no significant effect on the protein levels of BRD4 and CK2. [1]
In vivo	In MDA-MB-468 and MDA-MB-231 xenograft tumor models, BRD4/CK2-IN-1 (25 mg/kg and 50 mg/kg) was administered intravenously and orally to inhibit tumor growth in a dose-dependent manner. [1]

## Solubility Information

Solubility	DMSO: 16 mg/mL (28.37 mM),when pH is adjusted to 3 with HCl, sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.773 mL	8.8648 mL	17.7296 mL
5 mM	0.3546 mL	1.773 mL	3.5459 mL
10 mM	0.1773 mL	0.8865 mL	1.773 mL
50 mM	0.0355 mL	0.1773 mL	0.3546 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

Zhang J, et al. Discovery of Novel Dual-Target Inhibitor of Bromodomain-Containing Protein 4/Casein Kinase 2 Inducing Apoptosis and Autophagy-Associated Cell Death for Triple-Negative Breast Cancer Therapy. *J Med Chem.* 2021 Dec 23;64(24):18025-18053.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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