

RS6212

## Chemical Properties

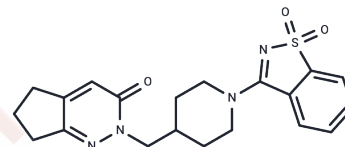
CAS No. : 2097925-52-3

Formula: C<sub>20</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>S

Molecular Weight: 398.48

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	RS6212 is a specific lactate dehydrogenase (LDH) inhibitor (IC <sub>50</sub> =12.03 μM). RS6212 shows strong anticancer activity in a variety of cancer cell lines.
Targets(IC <sub>50</sub> )	Others,OXPHOS,Dehydrogenase
In vitro	Cancer cells often transition from mitochondrial oxidative phosphorylation to aerobic glycolysis, a process facilitated by lactate dehydrogenase (LDH) and influenced by the abnormal activation of the Sonic Hedgehog (SHH) pathway. RS6212 (compound 18) demonstrates significant anti-proliferative effects on cancer cells by inhibiting this metabolic shift. At various concentrations (1 μM, 10 μM, 100 μM; 24 hours), RS6212 markedly inhibits Med-MB (SHH MB, medulloblastoma) growth with an IC <sub>50</sub> of 81 μM. Furthermore, exposure to RS6212 (80 μM; 6 hours) reduces LDH activity and glycolysis, decreases the extracellular acidification rate (ECAR), and elevates NADH levels. The compound also impedes HCT116 cell growth across a range of concentrations (0-320 μM; 48 hours) without inducing PARP cleavage or LC3B-I lipidation. A combination of RS6212 with rotenone at low nanomolar concentrations (50 nM and 100 nM; 24 hours) significantly enhances the inhibitory effect on HCT116 cells and triggers programmed cell death through PARP cleavage. Cell Proliferation Assays further highlight RS6212's specificity in targeting LDH activity, as evidenced by its failure to inhibit proliferation in LDHA-deficient HCT116 CRC cells at 12.03 μM over 24 hours, whereas it successfully inhibits the growth of cancer cells with elevated glycolysis at an 80 μM concentration across various incubation times.

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.5095 mL	12.5477 mL	25.0954 mL
5 mM	0.5019 mL	2.5095 mL	5.0191 mL
10 mM	0.251 mL	1.2548 mL	2.5095 mL
50 mM	0.0502 mL	0.251 mL	0.5019 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.

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

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