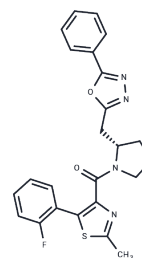


SB-674042

## Chemical Properties

CAS No. : 483313-22-0  
Formula: C<sub>24</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>S  
Molecular Weight: 448.51  
Appearance: no data available  
Storage: store at low temperature  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year



## Biological Description

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                | SB-674042 is a potent and selective dual antagonist of the non-peptide orexigenic peptides OX1 and OX2 receptors, with IC <sub>50</sub> s of 3.76 nM and 531 nM, respectively. SB-674042 can be used for the treatment of depression.                                                                                                                                                                                                                                                                                                                                                                                            |
| Targets(IC <sub>50</sub> ) | OX Receptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| In vitro                   | [(3)H]SB-674042 is a specific, high-affinity radioligand for the OX(1) receptor. Specific binding of [(3)H]SB-674042 was saturable in both whole cell and membrane formats. Analyses suggested a single high-affinity site, with K(d) values of 3.76+/-0.45 and 5.03+/-0.31 nM[1]. Treatment of cells co-expressing the orexin-1 and CB1 receptors with the orexin-1 receptor antagonist SB-674042 also resulted in re-localization of both receptors to the cell surface. Treatment with SB-674042 also reduced the potency of a CB1 receptor agonist to phosphorylate ERK1/2 only when the two receptors were co-expressed[4]. |
| In vivo                    | In the Stress Alternatives Model (SMA) in mice, administration of SB-674042 at a dose of 0.3 nM/0.3 µL via icv (intracerebroventricular injection) reduces contextual and cue fear freezing responses in Stay animals[2].                                                                                                                                                                                                                                                                                                                                                                                                        |

## Solubility Information

|            |                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 20 mg/mL (44.59 mM), Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--------------------------------------------------------------------------------------------------------------------------|

## A DRUG SCREENING EXPERT

### Preparing Stock Solutions

|       | 1mg       | 5mg       | 10mg      |
|-------|-----------|-----------|-----------|
| 1 mM  | 2.2296 mL | 11.148 mL | 22.296 mL |
| 5 mM  | 0.4459 mL | 2.2296 mL | 4.4592 mL |
| 10 mM | 0.223 mL  | 1.1148 mL | 2.2296 mL |
| 50 mM | 0.0446 mL | 0.223 mL  | 0.4459 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.

### Reference

Langmead CJ, et al. Characterisation of the binding of [3H]-SB-674042, a novel nonpeptide antagonist, to the human orexin-1 receptor. Br J Pharmacol. 2004 Jan;141(2):340-6.

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