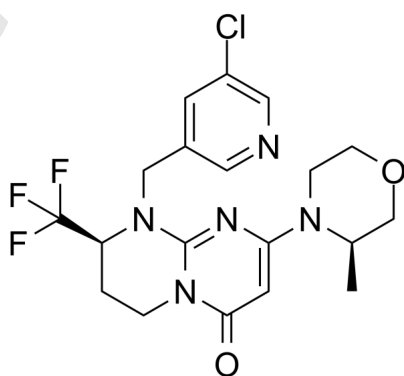


## Certificate of Analysis

|                |         |
|----------------|---------|
| Catalog Number | BP12481 |
| Product Name   | SAR405  |

## Physical and Chemical Properties

|  |   |
|--|---|
| CAS No.                                  | 1523406-39-4  |
| Chemical Formula                         | C <sub>19</sub> H <sub>21</sub> ClF <sub>3</sub> N <sub>5</sub> O <sub>2</sub>  |
| Molecular Weight                         | 443.86  |
| Solubility                               | DMSO: 27 mg/mL (60.83 mM)   |
| Storage                                  | Powder: -20°C for 2 years<br>In solvent: -80°C for 1 year   |
| Chemical Structure<br>OR<br>Tested Image |  <p>The chemical structure of SAR405 is a complex molecule featuring a central pyrimidine ring. It has a 4-chlorophenyl group at position 2, a 4-(trifluoromethyl)phenyl group at position 6, and a 4-methyl-1,3-dioxol-2-yl group at position 4. The pyrimidine ring also has a carbonyl group at position 1 and a methyl group at position 3.</p> |

## Product Information

|                          |  |
|--------------------------|--|
| Description              | SAR-405 is a potent and selective PIK3C3/Vps34 inhibitor (IC <sub>50</sub> :1.2 nM; K <sub>d</sub> :1.5 nM) that prevents autophagy and synergizes with MTOR inhibition in tumor cells. SAR405 treatment also inhibits autophagy induced either by starvation or by MTOR (mechanistic target of rapamycin) inhibition. Combining SAR405 with everolimus results in a significant synergy on the reduction of cell proliferation using renal tumor cells.   |
| Targets&IC <sub>50</sub> | Autophagy:, Vps34:1.2 nM, Vps34:1.5 nM (kd)  |
| In vitro                 | SAR405, a low molecular mass kinase inhibitor of PIK3C3, highly potent and selective with regard to other lipid and protein kinases.?Inhibiting the catalytic activity of PIK3C3 disrupts vesicle trafficking from late endosomes to lysosomes.?SAR405 treatment also inhibits autophagy induced either by starvation or by MTOR (mechanistic target of rapamycin) inhibition.?SAR405 prevents autophagosome formation (IC <sub>50</sub> : 42 nM).?Treatment of starved cells with SAR405 fully inhibits the conversion to LC3-II in a dose-dependent manner.?The GFP-LC3 model is used for the HTS and confirmed its activity on starved cells (IC <sub>50</sub> =419 nM) . |

## Analytical Data

|                                 |  |
|---------------------------------|--|
| HPLC                            | Shows Min >99% purity  |
| H-NMR                           | Consistent with structure  |
| Stability and Solubility Advice | Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details. |

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