

## SAG

Catalog Number :9128694

RUO: For Research Use Only. Not for use in diagnostic procedures.

### Product Information

**Synonyms:** AC1NR49D, ChEMBL1221983

**Chemical Name:** 3-chloro-N-[4-(methylamino)cyclohexyl]-N-[(3-pyridin-4-ylphenyl)methyl]-1-benzothiophene-2-carboxamide

**Molecular Formula:** C<sub>28</sub>H<sub>28</sub>ClN<sub>3</sub>OS

**Molecular Weight:** 490.1

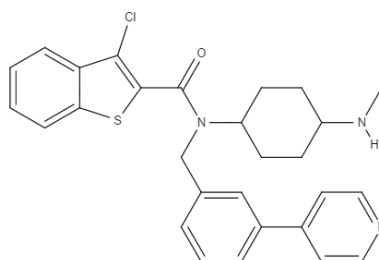
**CAS Number:** 912545-86-9

**Purity:** ≥98%

**Applications:** FA

**Formulation:** Crystalline solid

**Storage:** Product should be kept at -20°C.



### Description

SAG is a cell-permeable agonist for smoothened, a key part of the hedgehog signaling pathway. It directly activates smoothened and can prevent cyclopamine inhibition. SAG can be used to enhance the neuronal differentiation of human induced pluripotent stem cells and aid in the survival and proliferation of neuronal precursors. It is reported to prevent drug induced brain injury and stimulate normal cerebellum after injection in mice with an induced Down's syndrome-like condition.

### Preparation & Storage

Soluble in organic solvents such as ethanol or DMSO. DMSO up to 40mM.

### References

1. Heine, V. M., Griveau, A., Chapin, C., Ballard, P. L., Chen, J. K., Rowitch, D. H. (2011). A small-molecule smoothened agonist prevents glucocorticoid-induced neonatal cerebellar injury.; *Science translational medicine*,;3(105), 105ra104-105ra104.
2. Bragina, O., Sergejeva, S., Serg, M., Žarkovsky, T., Maloverjan, A., Kogerman, P., Žarkovsky, A. (2010). Smoothened agonist augments proliferation and survival of neural cells.; *Neuroscience letters*,;482(2), 81-85.
3. Chen, J. K., Taipale, J., Young, K. E., Maiti, T., Beachy, P. A. (2002). Small molecule modulation of Smoothened activity.; *Proceedings of the National Academy of Sciences*,;99(22), 14071-14076.