

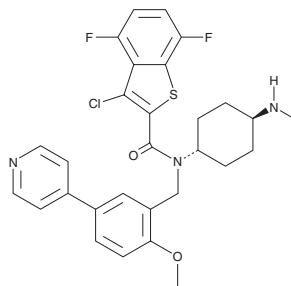
# PRODUCT INFORMATION



## SAG 21k

Item No. 41121

**CAS Registry No.:** 946002-48-8  
**Formal Name:** 3-chloro-4,7-difluoro-N-[[2-methoxy-5-(4-pyridinyl)phenyl]methyl]-N-[*trans*-4-(methylamino)cyclohexyl]-benzo[b]thiophene-2-carboxamide  
**MF:** C<sub>29</sub>H<sub>28</sub>ClF<sub>2</sub>N<sub>3</sub>O<sub>2</sub>S  
**FW:** 556.1  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

SAG 21k is supplied as a solid. A stock solution may be made by dissolving the SAG 21k in the solvent of choice, which should be purged with an inert gas. SAG 21k is sparingly soluble (1-10 mg/ml) in ethanol and slightly soluble (0.1-1 mg/ml) in DMSO.

### Description

SAG 21k is an agonist of the hedgehog signaling pathway.<sup>1</sup> It activates the Smoothed receptor (Smo) in a reporter assay using C3H/10T1/2 cells expressing Smo (EC<sub>50</sub> = 0.3 nM). SAG 21k (1 nM) increases the levels of mRNA encoding Ki67, coiled-coil domain-containing protein 1 (Ccdc1), collagen II, alkaline phosphatase (ALP), nuclear glioma-associated oncogene 1 (Gli1), and Gli2, and decreases the levels of mRNA encoding matrix metalloproteinase-13 (MMP-13) in mouse primary chondrocytes.<sup>2</sup> *In vivo*, SAG 21k (5 mg/kg per day), in combination with the PHD2 antagonist IOX2 (Item No. 11573), induces the formation of bone calluses and partial bone unions and increases total bone volume, but not total tissue volume, in a mouse model of surgery-induced non-healing bone fracture.

### References

1. Brunton, S.A., Stibbard, J.H., Rubin, L.L., *et al.* Potent agonists of the Hedgehog signaling pathway. *Bioorg. Med. Chem. Lett.* **19**(15), 4308-4311 (2009).
2. Rundle, C.H., Gomez, G.A., Pourteymoor, S., *et al.* Sequential application of small molecule therapy enhances chondrogenesis and angiogenesis in murine segmental defect bone repair. *J. Orthop. Res.* **41**(7), 1471-1481 (2023).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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