Product data sheet

MedKoo Cat#: 563074	
Name: HhAntag	
CAS: 496794-70-8	
Chemical Formula: $C_{24}H_{23}ClN_4O_3$	
Exact Mass: 450.1459	
Molecular Weight: 450.923	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

HhAntag is a GLI1-mediated transcription inhibitor. It acts as an inhibitor of the Shh pathway.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	1.0	2.22
DMSO	51.0	113.10
DMSO:PBS (pH 7.2) (1:2)	0.3	0.67
Ethanol	1.0	2.22

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.22 mL	11.09 mL	22.18 mL
5 mM	0.44 mL	2.22 mL	4.44 mL
10 mM	0.22 mL	1.11 mL	2.22 mL
50 mM	0.04 mL	0.22 mL	0.44 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Kurio N, Saunders C, Bechtold TE, Salhab I, Nah HD, Sinha S, Billings PC, Pacifici M, Koyama E. Roles of Ihh signaling in chondroprogenitor function in postnatal condylar cartilage. Matrix Biol. 2018 Apr;67:15-31. doi: 10.1016/j.matbio.2018.02.011. Epub 2018 Feb 12. PMID: 29447948; PMCID: PMC5910228.
2. Bechtold TE, Saunders C, Decker RS, Um HB, Cottingham N, Salhab I, Kurio N, Billings PC, Pacifici M, Nah HD, Koyama E. Osteophyte formation and matrix mineralization in a TMJ osteoarthritis mouse model are associated with ectopic hedgehog signaling. Matrix Biol. 2016 May-Jul;52-54:339-354. doi: 10.1016/j.matbio.2016.03.001. Epub 2016 Mar 3. PMID: 26945615; PMCID: PMC4875867.

In vivo study

1. Zeng J, Aziz K, Chettiar ST, Aftab BT, Armour M, Gajula R, Gandhi N, Salih T, Herman JM, Wong J, Rudin CM, Tran PT, Hales RK. Hedgehog pathway inhibition radiosensitizes non-small cell lung cancers. Int J Radiat Oncol Biol Phys. 2013 May 1;86(1):143-9. doi: 10.1016/j.ijrobp.2012.10.014. Epub 2012 Nov 20. PMID: 23182391; PMCID: PMC4145860.

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2. Shi Y, Moura U, Opitz I, Soltermann A, Rehrauer H, Thies S, Weder W, Stahel RA, Felley-Bosco E. Role of hedgehog signaling in malignant pleural mesothelioma. Clin Cancer Res. 2012 Sep 1;18(17):4646-56. doi: 10.1158/1078-0432.CCR-12-0599. Epub 2012 Jun 25. PMID: 22733539.

7. Bioactivity

Biological target:

HhAntag is a specific, potent and orally active small molecule SMO antagonist of the Hh pathway.

In vitro activity

Treatment with rhSHH significantly increased alkaline phosphatase (APase) activity in a dose dependent manner by day 7 compared to controls while HhAntag, a hedgehog signaling inhibitor, significantly attenuated APase activity. Moreover, HhAntag treatment attenuated rhSHH-induced APase activity as well.

Reference: Matrix Biol. 2018 Apr;67:15-31. https://pubmed.ncbi.nlm.nih.gov/29447948/

In vivo activity

Treatment of tumor-bearing mice with the SMO inhibitor HhAntag led to a significant inhibition of tumor growth in vivo accompanied by decreased Ki-67 and nuclear YAP immunostaining and a significant difference in selected gene expression profile in tumors.

Reference: Clin Cancer Res. 2012 Sep 1;18(17):4646-56. https://pubmed.ncbi.nlm.nih.gov/22733539/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.