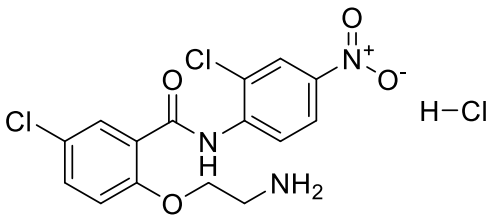
Product data sheet

MedKoo Cat#: 533009 Name: HJC0152 CAS: 1420290-99-8 Chemical Formula: $C_{15}H_{14}Cl_3N_3O_4$ Exact Mass: 405.005 Molecular Weight: 406.644	
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:
HJC0152 is a signal transducer and activator of transcription 3 (STAT3) inhibitor against human head and neck squamous cell carcinoma (HNSCC).

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	0.1	0.25
DMSO	30.33	74.59

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.46 mL	12.30 mL	24.59 mL
5 mM	0.49 mL	2.46 mL	4.92 mL
10 mM	0.25 mL	1.23 mL	2.46 mL
50 mM	0.05 mL	0.25 mL	0.49 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. Lu L, Li H, Wu X, Rao J, Zhou J, Fan S, Shen Q. HJC0152 suppresses human non-small-cell lung cancer by inhibiting STAT3 and modulating metabolism. Cell Prolif. 2020 Mar;53(3):e12777. doi: 10.1111/cpr.12777. Epub 2020 Feb 5. PMID: 32022328; PMCID: PMC7106968.
2. Li Z, Zhu T, Xu Y, Wu C, Chen J, Ren Y, Kong L, Sun S, Guo W, Wang Y, Jing C, Dong J, Zhou J, Zhang L, Shen Q, Zhou X. A novel STAT3 inhibitor, HJC0152, exerts potent antitumor activity in glioblastoma. Am J Cancer Res. 2019 Apr 1;9(4):699-713. PMID: 31105997; PMCID: PMC6511646.

In vivo study

1. Jiang X, Wu M, Xu Z, Wang H, Wang H, Yu X, Li Z, Teng L. HJC0152, a novel STAT3 inhibitor with promising anti-tumor effect in gastric cancer. Cancer Manag Res. 2018 Dec 12;10:6857-6867. doi: 10.2147/CMAR.S188364. PMID: 30588091; PMCID: PMC6296682.
2. Wang Y, Wang S, Wu Y, Ren Y, Li Z, Yao X, Zhang C, Ye N, Jing C, Dong J, Zhang K, Sun S, Zhao M, Guo W, Qu X, Qiao Y, Chen H, Kong L, Jin R, Wang X, Zhang L, Zhou J, Shen Q, Zhou X. Suppression of the Growth and Invasion of Human Head and Neck Squamous Cell Carcinomas via Regulating STAT3 Signaling and the miR-21/β-catenin Axis with HJC0152. Mol Cancer Ther. 2017 Apr;16(4):578-590. doi: 10.1158/1535-7163.MCT-16-0606. Epub 2017 Jan 30. PMID: 28138036; PMCID: PMC5380531.

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7. Bioactivity

Biological target:

HJC0152 hydrochloride is a signal transducers and activators of transcription 3 (STAT3) inhibitor.

In vitro activity

As shown in Figure Figure1C-E, HJC0152 showed a significant inhibitory effect that was both concentration- and time-dependent. The IC_{50} values of HJC0152 against A549, H460 and H1299 cells were 5.11, 5.01 and 13.21 μmol/L, respectively (Figure 1F-H). These findings suggest that HJC0152 has a strong cytostatic and cytotoxic effect on NSCLC cells and that NSCLC cells with higher p-STAT3 (Tyr705) levels are more sensitive to HJC0152.

Reference: Cell Prolif. 2020 Mar;53(3):e12777. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7106968/

In vivo activity

To determine the anti-tumor effect of HJC0152 in vivo, nude mice were subcutaneously inoculated with MKN45 cells and treated with HJC0152 (7.5 mg/kg) or PBS. As exhibited in Figure 3A–C, the tumor volumes (P<0.001) and tumor weight (P<0.01) were significantly lower in the HJC0152-treated group compared with the control group.

Reference: Cancer Manag Res. 2018 Dec 12;10:6857-6867. https://pubmed.ncbi.nlm.nih.gov/30588091/

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.