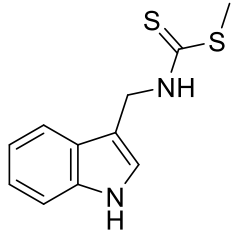


Product data sheet



MedKoo Cat#: 540050 Name: Brassinin CAS#: 105748-59-2 Chemical Formula: C ₁₁ H ₁₂ N ₂ S ₂ Exact Mass: 236.0442 Molecular Weight: 236.35	
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:

Brassinin is an indoleamine-2,3-dioxygenase inhibitor found in cruciferous vegetables. It induces cell cycle arrest and apoptosis in prostate cancer cells and inhibits DMBA-induced skin tumor formation in vivo.

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
DMSO	10.0	42.31
DMF	10.0	42.31
Ethanol	10.0	42.31

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.23 mL	21.16 mL	42.31 mL
5 mM	0.85 mL	4.23 mL	8.46 mL
10 mM	0.42 mL	2.12 mL	4.23 mL
50 mM	0.08 mL	0.42 mL	0.85 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

- Hong T, Ham J, Song J, Song G, Lim W. Brassinin Inhibits Proliferation in Human Liver Cancer Cells via Mitochondrial Dysfunction. *Cells*. 2021 Feb 5;10(2):332. doi: 10.3390/cells10020332. PMID: 33562611; PMCID: PMC7915448.
- Yang MH, Lee JH, Ko JH, Jung SH, Sethi G, Ahn KS. Brassinin Represses Invasive Potential of Lung Carcinoma Cells through Deactivation of PI3K/Akt/mTOR Signaling Cascade. *Molecules*. 2019 Apr 22;24(8):1584. doi: 10.3390/molecules24081584. PMID: 31013639; PMCID: PMC6514890.

In vivo study

- Lee JH, Kim C, Sethi G, Ahn KS. Brassinin inhibits STAT3 signaling pathway through modulation of PIAS-3 and SOCS-3 expression and sensitizes human lung cancer xenograft in nude mice to paclitaxel. *Oncotarget*. 2015 Mar 20;6(8):6386-405. doi: 10.18632/oncotarget.3443. PMID: 25788267; PMCID: PMC4467444.

7. Bioactivity

Biological target:

An anticancer phytoalexin.

Product data sheet



In vitro activity

Brassinin reduced cell proliferation in a dose-dependent manner (Figure 1A,B). Specifically, 100 μ M of brassinin reduced the proliferation of Huh7 cells to 39% and that of Hep3B cells to 49% (***) $p < 0.001$). In contrast, brassinin suppressed the viability of AML-12 cells (mouse normal liver cells) to about 86% compared with the vehicle, which implies that brassinin works specifically on HCC cells (Supplementary Figure S1A).

Reference: Cells. 2021 Feb; 10(2): 332. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7915448/>

In vivo activity

BSN (brassinin) alone when given at 180 mg/kg very effectively inhibited the growth of the tumor when compared with control. Paclitaxel alone was also significantly more effective when compared with control. The combination of the two agents was more effective in reducing the tumor burden (Fig. 6B and C). The tumor weight (Fig. 6D) in the combination of BSN and paclitaxel group was significantly lower than BSN alone group or paclitaxel alone group. Furthermore, the BSN and paclitaxel did not affect the body weight of mice (Fig. 6E).

Reference: Oncotarget. 2015 Mar 20;6(8):6386-405. <https://pubmed.ncbi.nlm.nih.gov/25788267/>

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.