

Product data sheet



MedKoo Cat#: 574579 Name: Bavachin CAS#: 19879-32-4 Chemical Formula: C ₂₀ H ₂₀ O ₄ Exact Mass: 324.1362 Molecular Weight: 324.37		
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:

Bavachin is a phytoestrogen that activates the estrogen receptors ER α and ER β .

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	64.67	199.37
DMF	50.0	154.14
DMF:PBS (pH 7.2) (1:3)	0.25	0.77
Ethanol	32.50	100.19

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.08 mL	15.41 mL	30.83 mL
5 mM	0.62 mL	3.08 mL	6.17 mL
10 mM	0.31 mL	1.54 mL	3.08 mL
50 mM	0.06 mL	0.31 mL	0.62 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. Hung YL, Wang SC, Suzuki K, Fang SH, Chen CS, Cheng WC, Su CC, Yeh HC, Tu HP, Liu PL, Huang MY, Li CY. Bavachin attenuates LPS-induced inflammatory response and inhibits the activation of NLRP3 inflammasome in macrophages. *Phytomedicine*. 2019 Jun;59:152785. doi: 10.1016/j.phymed.2018.12.008. Epub 2018 Dec 10. PMID: 31009850.
2. Lee JY, Lim W, Song G. Bavachin suppresses human placental choriocarcinoma cells by targeting electron transport chain complexes and mitochondrial dysfunction. *Free Radic Biol Med*. 2020 Aug 20;156:26-35. doi: 10.1016/j.freeradbiomed.2020.05.022. Epub 2020 Jun 5. PMID: 32505737.

In vivo study

TBD

7. Bioactivity

Biological target: Bavachin activates the estrogen receptors ER α and ER β with EC₅₀s of 320 and 680 nM, respectively.

In vitro activity

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Apoptosis and caspase activities were increased by bavachin in placental choriocarcinoma cells. Bavachin altered metabolic phenotypes by regulating electron transport chain complex and OXPHOS to suppress choriocarcinoma cell proliferation. It also led to calcium disruption and endoplasmic reticulum stress accompanied by mitochondrial membrane potential depolarization. It showed synergistic anti-cancer effects with paclitaxel on placental choriocarcinoma cells. Taken together, these results suggest that bavachin has therapeutic potential against placental choriocarcinoma and may be used to counter paclitaxel-induced toxicity.

Reference: Free Radic Biol Med. 2020 Aug 20;156:26-35.

<https://www.sciencedirect.com/science/article/abs/pii/S0891584920310789?via%3Dihub>

In vivo activity

TBD

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.