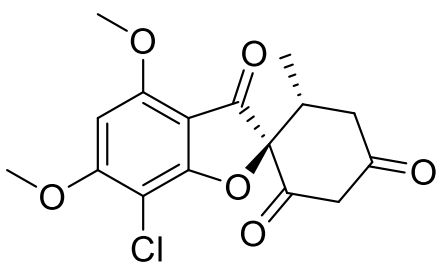


Product data sheet



MedKoo Cat#: 464060 Name: Griseofulvic Acid CAS: 469-54-5 Chemical Formula: C ₁₆ H ₁₅ ClO ₆ Exact Mass: 338.0557 Molecular Weight: 338.74		
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:

Griseofulvic acid is a metabolite of the antifungal griseofulvin. It induces protein aggregation and tubulin polymerization in cell-free assays.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.95 mL	14.76 mL	29.52 mL
5 mM	0.59 mL	2.95 mL	5.90 mL
10 mM	0.29 mL	1.48 mL	2.95 mL
50 mM	0.06 mL	0.29 mL	0.59 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

- Zhong N, Chen H, Zhao Q, Wang H, Yu X, Eaves AM, Sheng W, Miao J, Cui F, Wang J. Effects of griseofulvin on apoptosis through caspase-3- and caspase-9-dependent pathways in K562 leukemia cells: An in vitro study. *Curr Ther Res Clin Exp.* 2010 Dec;71(6):384-97. doi: 10.1016/S0011-393X(10)80004-9. PMID: 24688157; PMCID: PMC3969622.
- Rathinasamy K, Jindal B, Asthana J, Singh P, Balaji PV, Panda D. Griseofulvin stabilizes microtubule dynamics, activates p53 and inhibits the proliferation of MCF-7 cells synergistically with vinblastine. *BMC Cancer.* 2010 May 19;10:213. doi: 10.1186/1471-2407-10-213. PMID: 20482847; PMCID: PMC2885362.

In vivo study

- Chandana M, Anand A, Ghosh S, Das R, Beura S, Jena S, Suryawanshi AR, Padmanaban G, Nagaraj VA. Malaria parasite heme biosynthesis promotes and griseofulvin protects against cerebral malaria in mice. *Nat Commun.* 2022 Jul 12;13(1):4028. doi: 10.1038/s41467-022-31431-z. PMID: 35821013; PMCID: PMC9276668.
- Matsumura Y, Yokota M, Yoshioka H, Shibata S, Ida S, Takiguchi Y. Acute effects of griseofulvin on the pharmacokinetics and pharmacodynamics of warfarin in rats. *J Int Med Res.* 1999 Jul-Aug;27(4):167-75. doi: 10.1177/030006059902700402. PMID: 10599028.

7. Bioactivity

Biological target:

Product data sheet



Griseofulvin(Gris-PEG; Grifulvin) is a spirocyclic fungal natural product used in treatment of fungal dermatophytes; Antifungal drug.

In vitro activity

Griseofulvin could inhibit the growth of K562 cells in a dose-dependent manner with a mean (SD) inhibitory concentration of 50% value of 15.38 (1.35) $\mu\text{g/mL}$ compared with untreated controls. Apoptosis was induced in K562 cells (38.35% [2.73%]; $P < 0.01$) by griseofulvin with the observation of both an increase in phosphatidylserine level and accumulation of chromatin nucleation in griseofulvintreated cells.

Reference: Curr Ther Res Clin Exp. 2010 Dec;71(6):384-97. <https://pubmed.ncbi.nlm.nih.gov/24688157/>

In vivo activity

Therefore, this study evaluated the potential of griseofulvin in preventing ECM by treating WT-infected C57BL/6 mice from day 4 when the blood parasitemia was around 2%. A single dose of 2 mg/day (comparable with the dosage of humans) administered from day 4 and continued until day 8 showed the best protection. While ~80% of the control mice succumbed to ECM within day 10, >80% of the treated mice were protected from ECM.

Reference: Nat Commun. 2022 Jul 12;13(1):4028. <https://pubmed.ncbi.nlm.nih.gov/35821013/>

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.