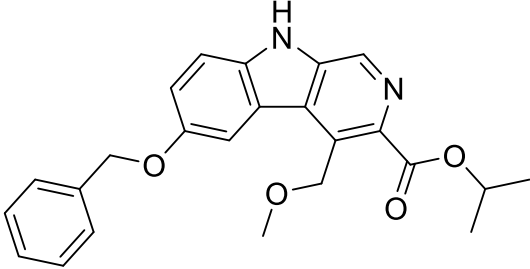


# Product data sheet



MedKoo Cat#: 571354 Name: Abecarnil CAS#: 111841-85-1 Chemical Formula: C <sub>24</sub> H <sub>24</sub> N <sub>2</sub> O <sub>4</sub> Exact Mass: 404.1736 Molecular Weight: 404.47	
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:

Abecarnil is a beta carboline and a partial benzodiazepine-receptor agonist that has demonstrated promise as an anxiolytic agent. It may be useful in treating generalized anxiety disorder.

## 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
N/A	N/A	N/A

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.47 mL	12.36 mL	24.72 mL
5 mM	0.49 mL	2.47 mL	4.94 mL
10 mM	0.25 mL	1.24 mL	2.47 mL
50 mM	0.12 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. Stephens DN, Schneider HH, Kehr W, Andrews JS, Rettig KJ, Turski L, Schmiechen R, Turner JD, Jensen LH, Petersen EN, et al. Abecarnil, a metabolically stable, anxiolytic beta-carboline acting at benzodiazepine receptors. *J Pharmacol Exp Ther*. 1990 Apr;253(1):334-43. PMID: 1970361.

### In vivo study

1. Serra M, Dazzi L, Cagetti E, Chessa MF, Pisu MG, Sanna A, Biggio G. Effect of pentylentetrazole-induced kindling on acetylcholine release in the hippocampus of freely moving rats. *J Neurochem*. 1997 Jan;68(1):313-8. doi: 10.1046/j.1471-4159.1997.68010313.x. PMID: 8978740.

2. Barbaccia ML, Roscetti G, Bolacchi F, Concas A, Mostallino MC, Purdy RH, Biggio G. Stress-induced increase in brain neuroactive steroids: antagonism by abecarnil. *Pharmacol Biochem Behav*. 1996 May;54(1):205-10. doi: 10.1016/0091-3057(95)02133-7. PMID: 8728559.

## 7. Bioactivity

### Biological target:

Abecarnil (ZK 112119) is a ligand or a partial agonist for benzodiazepine (BZ) receptor. Abecarnil can act as a positive allosteric modulator of GABAA receptor. Abecarnil inhibits the binding of the BZ [3H]lormetazepam to rat cerebral cortex membranes, with an IC50 of 0.82 nM.

# Product data sheet



## In vitro activity

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In vitro, abecarnil inhibited the binding of the BZ [3H]lormetazepam to rat cerebral cortex membranes with an IC50 value of 0.82 nM in comparison to 56 nM for DZP.

Reference: J Pharmacol Exp Ther. 1990 Apr;253(1):334-43. <https://pubmed.ncbi.nlm.nih.gov/1970361/>

## In vivo activity

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Abecarnil, a selective benzodiazepine receptor agonist with marked anticonvulsant activity, was administered together with chronic PTZ to evaluate whether persistent activation of GABAA receptors and suppression of seizures during kindling might affect the sensitivity of septohippocampal cholinergic neurons to a challenge dose of PTZ. Abecarnil (1 mg/kg, i.p.) administered 40 min before each PTZ injection neither antagonized the decrease in basal acetylcholine release (2.26 +/- 0.19 pmol per 20-min sample) nor prevented the development of kindling. In contrast, abecarnil prevented the chronic PTZ-induced increase in the sensitivity of acetylcholine release to a challenge dose of PTZ.

Reference: J Neurochem. 1997 Jan;68(1):313-8. <https://pubmed.ncbi.nlm.nih.gov/8978740/>

*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.*