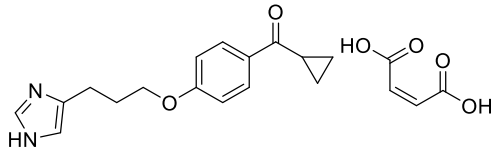


# Product data sheet



MedKoo Cat#: 326719 Name: Ciproxifan maleate CAS#: 184025-19-2 (maleate) Chemical Formula: C <sub>20</sub> H <sub>22</sub> N <sub>2</sub> O <sub>6</sub> Exact Mass: 270.1368 Molecular Weight: 386.404	
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:

Ciproxifan, also known as FUB-359, is an extremely potent histamine H3 inverse agonist/antagonist. Ciproxifan produces wakefulness and attentiveness in animal studies, and produced cognitive enhancing effects without prominent stimulant effects at relatively low levels of receptor occupancy, and pronounced wakefulness at higher doses. It has therefore been proposed as a potential treatment for sleep disorders such as narcolepsy and to improve vigilance in old age, particularly in the treatment of conditions such as Alzheimer's disease. It also potentiated the effects of antipsychotic drugs, and has been suggested as an adjuvant treatment for schizophrenia.

## 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	77.0	199.27
Ethanol	54.0	139.75
Water	2.29	5.93

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.59 mL	12.94 mL	25.88 mL
5 mM	0.52 mL	2.59 mL	5.18 mL
10 mM	0.26 mL	1.29 mL	2.59 mL
50 mM	0.05 mL	0.26 mL	0.52 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. Mani V, Jaafar SM, Azahan NSM, Ramasamy K, Lim SM, Ming LC, Majeed ABA. Ciproxifan improves cholinergic transmission, attenuates neuroinflammation and oxidative stress but does not reduce amyloid level in transgenic mice. *Life Sci.* 2017 Jul 1;180:23-35. doi: 10.1016/j.lfs.2017.05.013. Epub 2017 May 10. PMID: 28501482.

### In vivo study

1. Chauveau F, De Job E, Poly-Thomasson B, Cavroy R, Thomasson J, Fromage D, Beracochea D. Procognitive impact of ciproxifan (a histaminergic H3 receptor antagonist) on contextual memory retrieval after acute stress. *CNS Neurosci Ther.* 2019 Aug;25(8):832-841. doi: 10.1111/cns.13113. Epub 2019 May 15. PMID: 31094061; PMCID: PMC6630007.

2. Lu CW, Lin TY, Chang CY, Huang SK, Wang SJ. Ciproxifan, a histamine H3 receptor antagonist and inverse agonist, presynaptically inhibits glutamate release in rat hippocampus. *Toxicol Appl Pharmacol.* 2017 Mar 15;319:12-21. doi: 10.1016/j.taap.2017.01.017. Epub 2017 Jan 27. PMID: 28132918.

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## 7. Bioactivity

### Biological target:

Ciproxifan maleate (FUB 359 maleate) is a competitive antagonist of histamine H3-receptor, with an IC50 of 9.2 nM.

### In vitro activity

Ciproxifan significantly improved the behavioural parameters in RAM. Ciproxifan increased ACh and showed anti-oxidant properties by reducing NO and LPO levels as well as enhancing antioxidant levels. The neuroinflammatory analysis showed that ciproxifan reduced both COX-1 and COX-2 activities, decreased the level of pro-inflammatory cytokines IL-1 $\alpha$ , IL-1 $\beta$  and IL-6 and increased the level of anti-inflammatory cytokine TGF-1 $\beta$ .

Reference: Life Sci. 2017 Jul 1;180:23-35. <https://pubmed.ncbi.nlm.nih.gov/28501482/>

### In vivo activity

Ciproxifan increased memory retrieval of D2 in nonstress condition and of D1 in stress one. Ciproxifan mitigated the stress-induced increase of Fos expression in the prelimbic and infralimbic cortex, the central and basolateral amygdala and the CA1 of mouse dorsal hippocampus.

Reference: CNS Neurosci Ther. 2019 Aug;25(8):832-841. <https://pubmed.ncbi.nlm.nih.gov/31094061/>

*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.*