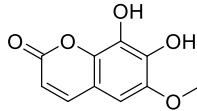


# Product data sheet



MedKoo Cat#: 600137 Name: Fraxetin CAS#: 574-84-5 Chemical Formula: C <sub>10</sub> H <sub>8</sub> O <sub>5</sub> Exact Mass: 208.03717 Molecular Weight: 208.17	
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:

Fraxetin is an O-methylated coumarin found in *Fraxinus rhynchophylla*. Fraxin is a glucoside of fraxetin.

## 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	54.0	259.40
DMSO:PBS (pH 7.2) (1:10)	0.09	0.43
DMF	5.0	24.02

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.80 mL	24.02 mL	48.04 mL
5 mM	0.96 mL	4.80 mL	9.61 mL
10 mM	0.48 mL	2.40 mL	4.80 mL
50 mM	0.10 mL	0.48 mL	0.96 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

- Hsieh YH, Hung TW, Chen YS, Huang YN, Chiou HL, Lee CC, Tsai JP. In Vitro and In Vivo Antifibrotic Effects of Fraxetin on Renal Interstitial Fibrosis via the ERK Signaling Pathway. *Toxins (Basel)*. 2021 Jul 9;13(7):474. doi: 10.3390/toxins13070474. PMID: 34357946; PMCID: PMC8310265.
- Song J, Ham J, Hong T, Song G, Lim W. Fraxetin Suppresses Cell Proliferation and Induces Apoptosis through Mitochondria Dysfunction in Human Hepatocellular Carcinoma Cell Lines Huh7 and Hep3B. *Pharmaceutics*. 2021 Jan 17;13(1):112. doi: 10.3390/pharmaceutics13010112. PMID: 33477262; PMCID: PMC7830088.

### In vivo study

- Qu L, Lin P, Lin M, Ye S, Papa Akuetteh PD, Youyou Zhu. Fraxetin Inhibits the Proliferation and Metastasis of Glioma Cells by Inactivating JAK2/STAT3 Signaling. *Evid Based Complement Alternat Med*. 2021 Apr 16;2021:5540139. doi: 10.1155/2021/5540139. PMID: 33959183; PMCID: PMC8075667.
- Balaha M, Ahmed N, Geddawy A, Kandeel S. Fraxetin prevented sodium fluoride-induced chronic pancreatitis in rats: Role of anti-inflammatory, antioxidant, antifibrotic and anti-apoptotic activities. *Int Immunopharmacol*. 2021 Apr;93:107372. doi: 10.1016/j.intimp.2021.107372. Epub 2021 Jan 29. PMID: 33524802.

# Product data sheet



## 7. Bioactivity

### Biological target:

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Fraxetin has antitumor, anti-oxidation effects and anti-inflammatory effects. Fraxetin induces apoptosis.

### In vitro activity

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At 20  $\mu$ M, fraxetin reduced the proliferation of Huh7 cells by >2-fold ( $p < 0.01$ ) and at 50  $\mu$ M, fraxetin reduced the proliferation of Hep3B cells by two-fold ( $p < 0.001$ ).

Reference: Pharmaceutics. 2021 Jan; 13(1): 112. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7830088/>

### In vivo activity

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Nine-weeks-old male Wistar rats drank distilled water containing 500 ppm sodium fluoride (NaF) for 60 days to induce chronic pancreatitis. Fraxetin in a dose-dependent manner alleviated chronic pancreatitis induced by NaF, as it restored the decreased body weight and weight gain rate, decreased the elevated serum amylase and lipase activities, pancreatic IL-6, TNF- $\alpha$ , MDA, caspase-3, MPO and hydroxyproline levels, and Bax/Bcl-2 ratio, enhanced pancreatic CAT and SOD activities, and GSH levels, besides it augmented the elevated IL-10 level, with the restoration of normal pancreatic architecture.

Reference: Int Immunopharmacol. 2021 Apr;93:107372. <https://pubmed.ncbi.nlm.nih.gov/33524802/>

*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.*