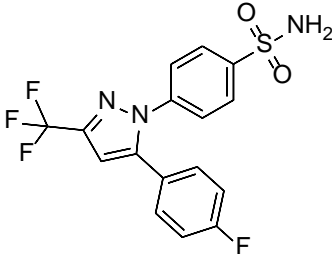


# Product data sheet



MedKoo Cat#: 525604 Name: Mavacoxib CAS#: 170569-88-7 Chemical Formula: C <sub>16</sub> H <sub>11</sub> F <sub>4</sub> N <sub>3</sub> O <sub>2</sub> S Exact Mass: 385.0508 Molecular Weight: 385.34		
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:

Mavacoxib is a veterinary drug used to treat pain and inflammation in dogs with degenerative joint disease. It acts as a COX-2 inhibitor.

## 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	163.50	424.30
Ethanol	77.0	199.82

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.60 mL	12.98 mL	25.95 mL
5 mM	0.52 mL	2.60 mL	5.19 mL
10 mM	0.26 mL	1.30 mL	2.60 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

- Hurst EA, Pang LY, Argyle DJ. The selective cyclooxygenase-2 inhibitor mavacoxib (Trocoxil) exerts anti-tumour effects in vitro independent of cyclooxygenase-2 expression levels. *Vet Comp Oncol.* 2019 Jun;17(2):194-207. doi: 10.1111/vco.12470. Epub 2019 Mar 13. PMID: 30767381.
- Pang LY, Argyle SA, Kamida A, Morrison KO, Argyle DJ. The long-acting COX-2 inhibitor mavacoxib (Trocoxil™) has anti-proliferative and pro-apoptotic effects on canine cancer cell lines and cancer stem cells in vitro. *BMC Vet Res.* 2014 Sep 5;10:184. doi: 10.1186/s12917-014-0184-9. PMID: 25190452; PMCID: PMC4172958.

### In vivo study

- Walton MB, Cowderoy EC, Wustefeld-Janssens B, Lascelles BD, Innes JF. Mavacoxib and meloxicam for canine osteoarthritis: a randomised clinical comparator trial. *Vet Rec.* 2014 Sep 20;175(11):280. doi: 10.1136/vr.102435. Epub 2014 May 23. PMID: 24859353.

## 7. Bioactivity

Biological target: Mavacoxib is a cyclooxygenase-2 (COX-2) inhibitor.

# Product data sheet



## In vitro activity

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The anti-tumourigenic effects of the selective, long-acting COX-2 inhibitor mavacoxib were evaluated. Mavacoxib was cytotoxic to a panel of human and canine osteosarcoma, mammary and bladder carcinoma cancer cell lines; it induced apoptosis and inhibited the migration of these cells. Interestingly, mavacoxib exerted these effects independently of elevated COX-2 expression. These results suggest that mavacoxib may be an effective anti-cancer agent independent of tumour COX-2 expression.

Reference: Vet Comp Oncol. 2019 Jun;17(2):194-207. <https://onlinelibrary.wiley.com/doi/abs/10.1111/vco.12470>

## In vivo activity

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Mavacoxib and meloxicam were compared in the management of canine OA (osteoarthritis). In all, 111 dogs with OA of the elbow, hip or stifle were randomly assigned to receive one of these NSAIDs for a 12-week period. Outcomes, including ground reaction forces and three validated clinical metrology instruments, were measured at baseline, 6 and 12 weeks. Improvements were seen in all outcome measures for both groups to a similar degree, and adverse events occurred at a similar rate. There were significant improvements in outcome measures from week 6 to week 12, as well as from baseline. Long-term meloxicam dose was more important than recent dose. Clinical efficacy and adverse event rates were similar for meloxicam and mavacoxib.

Reference: Vet Rec. 2014 Sep 20;175(11):280. <https://bvajournals.onlinelibrary.wiley.com/doi/abs/10.1136/vr.102435>

*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.*