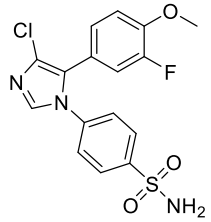
Product data sheet

MedKoo Cat#: 319629 Name: Cimicoxib CAS#: 265114-23-6 Chemical Formula: $C_{16}H_{13}ClFN_3O_3S$ Exact Mass: 381.035 Molecular Weight: 381.8064	
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:
Cimicoxib, aslo known as UR-8880, is a non-steroidal anti-inflammatory drug (NSAID) used in veterinary medicine to treat dogs for pain and inflammation associated with osteoarthritis and for the management of pain and inflammation associated with surgery. 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
N/A	N/A	N/A

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.62 mL	13.10 mL	26.19 mL
5 mM	0.52 mL	2.62 mL	5.24 mL
10 mM	0.26 mL	1.31 mL	2.62 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

N/A

In vivo study

1. Schneider M, Dron F, Cuinet E, Woehrlé F. Comparative pharmacokinetic profile of cimicoxib in dogs and cats after IV administration. Vet J. 2021 Apr;270:105625. doi: 10.1016/j.tvjl.2021.105625. Epub 2021 Feb 1. PMID: 33641805.
2. Di Salvo A, Giorgi M, Lee HK, Vercelli C, Rueca F, Marinucci MT, Rocca GD. Plasma profile of cimicoxib in sheep after oral administration at two different rates. Pol J Vet Sci. 2017 Sep 26;20(3):535-538. doi: 10.1515/pjvs-2017-0065. PMID: 29166275.

7. Bioactivity
Biological target:

Cimicoxib that inhibits COX-2 selectively over COX-1 (IC50s = 0.005 and 3.3 μM, respectively).

In vitro activity

N/A

In vivo activity

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Quinidine, a specific CYP2D15 inhibitor, is the most potent inhibitor of the metabolism of cimicoxib in canine and feline microsomes. Therefore, CYP2D15 is the main enzyme involved in the in vitro metabolism of cimicoxib in both species, among those tested. To a lower extent, CYP3A12 is also involved in the in vitro metabolism of cimicoxib. Quinidine inhibition of the metabolism of cimicoxib was about 30 times more potent in feline microsomes than in canine microsomes. As these results were obtained by competitive inhibition, the affinity of cimicoxib towards the enzyme was about 30 times lower in feline microsomes compared to canine microsomes. This activity difference may contribute to the slower in vivo elimination of cimicoxib in cats.

Reference: Vet J. 2021 Apr;270:105625. https://pubmed.ncbi.nlm.nih.gov/33641805/