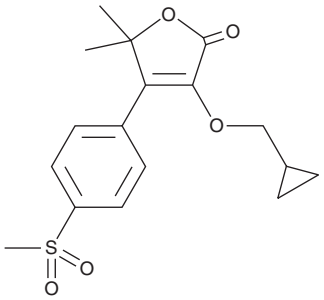
PRODUCT INFORMATION

Firocoxib

Item No. 28286

CAS Registry No.:	189954-96-9
Formal Name:	3-(cyclopropylmethoxy)-5,5-dimethyl-4-[4-(methylsulfonyl)phenyl]-2(5H)-furanone
Synonym:	ML-1785713
MF:	$C_{17}H_{20}O_5S$
FW:	336.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 210, 220, 291 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Firocoxib is supplied as a crystalline solid. A stock solution may be made by dissolving the firocoxib in the solvent of choice, which should be purged with an inert gas. Firocoxib is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of firocoxib in these solvents is approximately 3 mg/ml.

Firocoxib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, firocoxib should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Firocoxib has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Firocoxib is a selective inhibitor of COX-2 (IC_{50}s = 0.13 and 7.5 µM for COX-2 and COX-1, respectively, in isolated cat blood).[1] It inhibits LPS-induced production of prostaglandin E_2 (PGE_2; Item No. 14010) in isolated dog, horse, and cat whole blood *ex vivo*.[1-3] Firocoxib decreases lameness, induces analgesia, and improves range of motion in dogs and horses with osteoarthritis when administered at doses of 5 and 0.1 mg/kg per day, respectively.[4,5] Formulations containing firocoxib have been used in dogs and horses with osteoarthritis.

References

1. McCann, M.E., Rickes, E.L., Hora, D.F., *et al.* In vitro effects and in vivo efficacy of a novel cyclooxygenase-2 inhibitor in cats with lipopolysaccharide-induced pyrexia. *Am. J. Vet. Res.* **66(7)**, 1278-1284 (2005).
2. Goodman, L., Torres, B., Punke, J., *et al.* Effects of firocoxib and tepoxalin on healing in a canine gastric mucosal injury model. *J. Vet. Intern. Med.* **23(1)**, 56-62 (2009).
3. Barton, M.H., Paske, E., Norton, N., *et al.* Efficacy of cyclo-oxygenase inhibition by two commercially available firocoxib products in horses. *Equine Vet. J.* **46(1)**, 72-75 (2014).
4. Pollmeier, M., Toulemonde, C., Fleishman, C., *et al.* Clinical evaluation of firocoxib and carprofen for the treatment of dogs with osteoarthritis. *Vet. Rec.* **159(17)**, 547-551 (2006).
5. Doucet, M.Y., Bertone, A.L., Hendrickson, D., *et al.* Comparison of efficacy and safety of paste formulations of firocoxib and phenylbutazone in horses with naturally occurring osteoarthritis. *J. Am. Vet. Med. Assoc.* **232(1)**, 91-97 (2008).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM