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## Product Data Sheet

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Product Name: Nitroflurbiprofen (HCT 1206)

Cat. No.: GC34028

### Chemical Properties

Cas. No. 158836-71-6

SMILES O=C(OCCCCO[N+](=[O-])=O)C(C)C1=CC=C(C2=CC=CC=C2)C(F)=C1

Formula  $C_{19}H_{20}FNO_5$  M.Wt 361.36

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Protocol

#### Animal experiment:

Rats[1] Male Wistar rats, weighing 200-250 g, are used. After 18 weeks of TAA administration, cirrhotic rats are equally (n=8/group) and randomly allocated to one of the following groups: intraperitoneal injection, 24 hours and 1 hour prior to the measurements, with Nitroflurbiprofen (45 mg/kg), Flurbiprofen (30 mg/kg, equimolar concentration to Nitroflurbiprofen), or vehicle (250 µL DMSO:250 µL isotonic saline). The used dose is based on a dose-finding study (n=5 per condition). The concentrations of Nitroflurbiprofen (15 mg/kg) and Flurbiprofen (7.5 mg/kg, equimolar concentration to Nitroflurbiprofen) are started, then are increased the dose to Nitroflurbiprofen 22.5 mg/kg and Flurbiprofen 15 mg/kg, and, finally, Nitroflurbiprofen 45 mg/kg and Flurbiprofen 30 mg/kg. The last dose regimen has the most profound hemodynamic effects.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### References:

[1]. Laleman W, et al. Nitroflurbiprofen, a nitric oxide-releasing cyclooxygenase inhibitor, improves cirrhotic portalhypertension in rats. Gastroenterology. 2007 Feb;132(2):709-19.

### Background

Nitroflurbiprofen is a cyclooxygenase (COX) inhibitor with nitric oxide (NO)-donating properties, modulates the increased intrahepatic vascular tone in portal hypertensive cirrhotic rats.

In vivo hemodynamic measurements (n = 8/condition) and evaluation of the increased intrahepatic resistance by in situ perfusion (n=5/condition) are performed in rats with thioacetamide-induced cirrhosis that receive either Nitroflurbiprofen (45 mg/kg), Flurbiprofen (30 mg/kg, equimolar concentration to Nitroflurbiprofen), or vehicle by intraperitoneal injection 24 hours and 1 hour prior to the measurements. Treatment with Nitroflurbiprofen, an NO-releasing cyclooxygenase inhibitor, improves portal hypertension without major adverse effects in thioacetamide-induced cirrhotic rats by attenuating intrahepatic vascular resistance, endothelial dysfunction, and hepatic hyperreactivity to vasoconstrictors[1].

[1]. Laleman W, et al. Nitroflurbiprofen, a nitric oxide-releasing cyclooxygenase inhibitor, improves cirrhotic portalhypertension in rats. Gastroenterology. 2007 Feb;132(2):709-

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