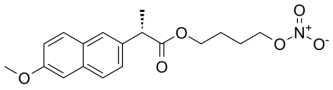
Naproxcinod

Cat. No.:	HY-14931
CAS No.:	163133-43-5
Molecular Formula:	$C_{18}H_{21}NO_6$
Molecular Weight:	347.36
Target:	COX
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Naproxcinod (Nitronaproxen) is the first in class of cyclooxygenase (COX)-inhibiting nitric oxide donators (CINODs). Naproxcinod shows analgesic and anti-inflammatory effects, it can be used for the research of osteoarthritis and inflammation[1][2][3].

In Vitro

Naproxcinod (1-30 μM; 15 min) concentration-dependently increases cGMP level up to 27-fold over basal level[1].
Naproxcinod (1-100 μM; 8 h) concentration-dependently increases HO-1 mRNA in endothelial cells[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	Endothelial and gastric mucosal cell lines
Concentration:	30-1000 μM
Incubation Time:	8 and 24 hours
Result:	Increased HO-1 protein levels in endothelial and gastric mucosal cells and increased HO-1mRNA levels in endothelial cells.

In Vivo

Naproxcinod (0-41 mg/kg; p.o. once daily for 42 weeks) shows a significantly higher mean BW (7.3%) than vehicle group and improves skeletal and cardiac disease phenotype in the mouse model of DMD[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/10 mice with Duchenne muscular dystrophy (DMD)[3]
Dosage:	0, 10, 21 and 41 mg/kg
Administration:	Oral gavage; 0-41 mg/kg once daily for 42 weeks
Result:	Significantly improved fraction shortening and ejection fraction, and reduced inflammation in vivo.

REFERENCES

[1]. Berndt G, et al. A common pathway of nitric oxide release from AZD3582 and glyceryl trinitrate. Eur J Pharm Sci. 2004 Feb;21(2-3):331-5.

[2]. Berndt G, et al. AZD3582 increases heme oxygenase-1 expression and antioxidant activity in vascular endothelial and gastric mucosal cells. Eur J Pharm Sci. 2005 Jun;25(2-3):229-35.

[3]. Uaesoontrachoon K, et al. Long-term treatment with naproxcinod significantly improves skeletal and cardiac disease phenotype in the mdx mouse model of dystrophy. Hum Mol Genet. 2014 Jun 15;23(12):3239-49.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA