Flosulide

Cat. No.:	HY-U00083
CAS No.:	80937-31-1
Molecular Formula:	$C_{16}H_{13}F_2NO_4S$
Molecular Weight:	353.34
Target:	COX
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description	Flosulide is a potent and selective **COX-2** inhibitor, used for the treatment for inflammatory diseases.
IC_{50} & Target	COX-2
In Vitro	Flosulide (1 nM-100 μM) causes a concentration-dependent and finally complete inhibition of PGE2 production in the OSC-2 cell line, but with no effect on PG formation in the OSC-1 cells. Flosulide completely suppresses mitotic activity of OSC-2 cells, whereas mitotic activity of OSC-1 cells remain unchanged[2].
In Vivo	In normovolemic rats, flosulide increases renal plasma flow (RPF) and and glomerular filtration rate (GFR). In hypovolemic rats, flosulide (5-25 mg/kg) reduces RPF and GFR. Flosulide at 5 mg/kg reduces 6-keto-PGF1alpha whereas at 25 mg/kg and after indomethacin at 10 mg/kg a fall in 6-keto-PGF1alpha and TXB2 appeares[1]. Flosulide (0.75 mg/day) significantly reduces proteinuria as compared to aspirin treatment. Plasma protein and albumin levels are significantly lower in the aspirin-treated group than in flosulide-treated rats[3].

PROTOCOL

Cell Assay [2]	The proliferation of the esophageal tumor cell lines is determined using the cell proliferation kit II. Tumor cells are incubated with flosulide and NS-398 at different concentrations for 48 h in DMEM containing FCS (10%), penicillin (100 units/mL), and streptomycin (0.1 mg/mL). After this time, the XTT labeling mixture is added, followed by 4 h of incubation and measurement of absorbance at 490 nm. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Turull A, et al. Acute effects of the anti-inflammatory cyclooxygenase-2 selective inhibitor, flosulide, on renal plasma flow and glomerular filtration rate in rats. Inflammation. 2001 Apr;25(2):119-28.

[2]. Zimmermann KC, et al. Cyclooxygenase-2 expression in human esophageal carcinoma. Cancer Res. 1999 Jan 1;59(1):198-204.

[3]. Heise G, et al. Different actions of the cyclooxygenase 2 selective inhibitor flosulide in rats with passive Heymann nephritis. Nephron. 1998 Oct;80(2):220-6.

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