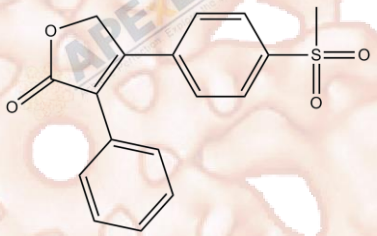
Product Data Sheet

Rofecoxib



Cat. No.:	B1454
CAS No.:	162011-90-7
Formula:	C17H14O4S
M.Wt:	314.36
Synonyms:	
Target:	Neuroscience
Pathway:	COX
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾15.72 mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	3.1811 mL	15.9053 mL	31.8107 mL
5 mM	0.6362 mL	3.1811 mL	6.3621 mL
10 mM	0.3181 mL	1.5905 mL	3.1811 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	COX-2 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Osteosarcoma cells and U937 cells
Preparation method:	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
Reacting conditions:	15 mins

	Applications:	In osteosarcoma cells (COX-2), Rofecoxib inhibited the arachidonic acid-dependent production of PGE2 by with an IC50 value of 26 ± 10 nM. However, in U937 cells (COX-1), Rofecoxib inhibited the arachidonic acid-dependent production of PGE2 with an IC50 value over 50 mM. It was indicated that Rofecoxib was a potent and selective inhibitor of human COX-2 in cell-based assays.
In Vivo	**Animal experiment**	
	Animal models:	Rat adjuvant-induced arthritis model
	Dosage form:	0.1, 0.3, 1.0 and 3.0 mg/kg/day; p.o.
	Applications:	Rofecoxib significantly inhibited carrageenan-induced paw edema and paw hyperalgesia, as well as lipopolysaccharide-induced pyresis with the IC50 values of 1.5 mg/kg, 1.0 mg/kg and 0.24 mg/kg, respectively. Besides, Rofecoxib also blocked adjuvant-induced arthritis with an IC50 value of 0.74 mg/day. In addition, Rofecoxib also showed a protective effect on adjuvant-induced destruction of cartilage and bone structures.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Chan C C, Boyce S, Brideau C, et al. Rofecoxib [Vioxx, MK-0966; 4-(4′-methylsulfonylphenyl)-3-phenyl-2-(5H)-furanone]: a potent and orally active cyclooxygenase-2 inhibitor. Pharmacological and biochemical profiles. Journal of Pharmacology and Experimental Therapeutics, 1999, 290(2): 551-560.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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