

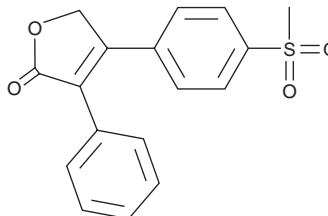
# PRODUCT INFORMATION



## Rofecoxib

Item No. 10010260

**CAS Registry No.:** 162011-90-7  
**Formal Name:** 4-[4-(methylsulfonyl)phenyl]-3-phenyl-2(5H)-furanone  
**Synonym:** MK-966  
**MF:** C<sub>17</sub>H<sub>14</sub>O<sub>4</sub>S  
**FW:** 314.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 284 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Rofecoxib is supplied as a crystalline solid. A stock solution may be made by dissolving the rofecoxib in the solvent of choice, which should be purged with an inert gas. Rofecoxib is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of rofecoxib in ethanol is approximately 0.1 mg/ml and approximately 25 mg/ml in DMSO and DMF.

### Description

Rofecoxib is a non-steroidal anti-inflammatory drug (NSAID) that selectively inhibits COX-2 over COX-1 with IC<sub>50</sub> values of 0.018 and >15 μM, respectively, for production of prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010) in CHO cells expressing the recombinant human enzymes.<sup>1</sup> *In vivo*, rofecoxib inhibits carrageenan-induced paw edema and hyperalgesia (ID<sub>50</sub>s = 1.5 and 1.0 mg/kg, respectively), LPS-induced pyresis (ID<sub>50</sub> = 0.24 mg/kg), and *M. butyricum*-induced arthritis (ID<sub>50</sub> = 0.74 mg/kg/day per day) in rats. Formulations containing rofecoxib were previously used in the treatment of pain and arthritis.

### Reference

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. *J. Pharmacol. Exp. Ther.* **290**(2), 551-560 (1999).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/29/2019

#### 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