

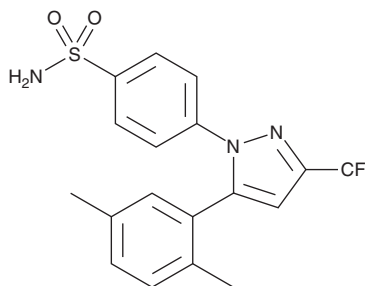
# PRODUCT INFORMATION



## 2,5-dimethyl Celecoxib

Item No. 10008006

**CAS Registry No.:** 457639-26-8  
**Formal Name:** 4-[5-(2,5-dimethylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]-benzenesulfonamide  
**Synonym:** DMC  
**MF:** C<sub>18</sub>H<sub>16</sub>F<sub>3</sub>N<sub>3</sub>O<sub>2</sub>S  
**FW:** 395.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 256 nm  
**Supplied as:** A 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

2,5-dimethyl Celecoxib is supplied as a solid. A stock solution may be made by dissolving the 2,5-dimethyl celecoxib in the solvent of choice, which should be purged with an inert gas. 2,5-dimethyl Celecoxib is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2,5-dimethyl celecoxib in ethanol is approximately 3 mg/ml and approximately 5 mg/ml in DMSO and DMF.

2,5-dimethyl Celecoxib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2,5-dimethyl celecoxib should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2,5-dimethyl Celecoxib has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

2,5-dimethyl Celecoxib is a derivative of celecoxib (Item No. 10008672) that does not inhibit COX-2 (IC<sub>50</sub> = >100 μM).<sup>1</sup> It does inhibit microsomal prostaglandin E synthase-1 (mPGES-1) in HeLa cells (IC<sub>50</sub> = 15.6 μM) and reduces prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010) production in HeLa, A549, and HCA-7 cells (IC<sub>50</sub>s = 0.64, 0.83, and 3.08 μM, respectively).<sup>2</sup> It inhibits proliferation of drug-sensitive RPMI8226 and multidrug-resistant 8226/Dox40 multiple myeloma cells, as well as increases the rate of apoptosis when used at concentrations of 20 and 30 μM.<sup>3</sup> 2,5-dimethyl Celecoxib reduces the expression of survivin, cyclin A, cyclin B, MEK1, and MEK2 in 8226/Dox40 cells. The antiproliferative effect of 2,5-dimethyl celecoxib is independent of mPGES-1 inhibition.<sup>2</sup>

### References

1. Zhu, J., Song, X., Lin, H.-P., *et al.* Using cyclooxygenase-2 inhibitors as molecular platforms to develop a new class of apoptosis-inducing agents. *J. Natl. Cancer Inst.* **94**(23), 1745-1757 (2002).
2. Wobst, I., Schiffmann, S., Birod, K., *et al.* Dimethylcelecoxib inhibits prostaglandin E<sub>2</sub> production. *Biochem. Pharmacol.* **76**(1), 62-69 (2008).
3. Kardosh, A., Soriano, N., Liu, Y.-T., *et al.* Multitarget inhibition of drug-resistant multiple myeloma cell lines by dimethyl-celecoxib (DMC), a non-COX-2 inhibitory analog of celecoxib. *Blood* **106**(13), 4330-4338 (2005).

#### 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, 11/07/2019

#### 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