

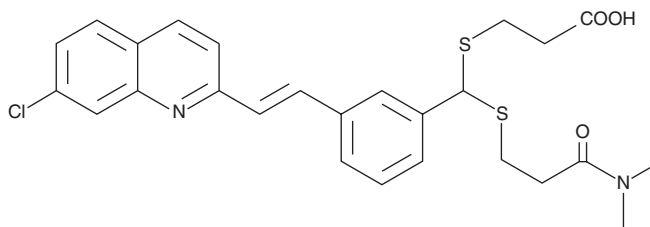
# PRODUCT INFORMATION



## MK-571

Item No. 10029

**CAS Registry No.:** 115104-28-4  
**Formal Name:** 3-[[[3-[(1E)-2-(7-chloro-2-quinolinyl)ethenyl]phenyl][3-(dimethylamino)-3-oxopropyl]thio]methyl]thio]propanoic acid  
**Synonym:** L-660,711  
**MF:** C<sub>26</sub>H<sub>27</sub>ClN<sub>2</sub>O<sub>3</sub>S<sub>2</sub>  
**FW:** 515.1  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 226, 283, 327, 344, 357 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

MK-571 is supplied as a crystalline solid. A stock solution may be made by dissolving the MK-571 in the solvent of choice, which should be purged with an inert gas. MK-571 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MK-571 in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

### Description

MK-571 is a cysteinyl leukotriene 1 (CysLT<sub>1</sub>) receptor antagonist (K<sub>i</sub> = 2.1 nM in a radioligand binding assay using isolated human lung membranes).<sup>1</sup> It inhibits contractions induced by leukotriene D<sub>4</sub> (LTD<sub>4</sub>; Item No. 20310) or LTE<sub>4</sub> (Item No. 20410) in histamine-primed isolated guinea pig trachea (pA<sub>2</sub>s = 9.4 and 9.1, respectively), but does not inhibit contractions induced by LTC<sub>4</sub> (Item No. 20210) in histamine-primed isolated guinea pig trachea when used at a concentration of 190 nM. MK-571 (100 nM) inhibits LTD<sub>4</sub>-induced calcium mobilization in COS-7 monkey kidney cells expressing the human CysLT<sub>1</sub> receptor in a reporter assay.<sup>2</sup> MK-571 (5 mg/kg) improves tissue damping and elasticity, markers of lung function, and decreases IL-4 and IL-5 levels in bronchoalveolar lavage fluid (BALF) in a mouse model of ovalbumin-induced asthma.<sup>3</sup>

### References

1. Jones, T.R., Zamboni, R., Belley, M., *et al.* Pharmacology of L-660,711 (MK-571): A novel potent and selective leukotriene D<sub>4</sub> receptor antagonist. *Can. J. Physiol. Pharmacol.* **67(1)**, 17-28 (1989).
2. Lynch, K.R., O'Neill, G.P., Liu, Q., *et al.* Characterization of the human cysteinyl leukotriene CysLT<sub>1</sub> receptor. *Nature* **399(6738)**, 789-793 (1999).
3. da Cunha, A.A., Silveira, J.S., Antunes, G.L., *et al.* Cysteinyl leukotriene induces eosinophil extracellular trap formation via cysteinyl leukotriene 1 receptor in a murine model of asthma. *Exp. Lung Res.* **47(8)**, 355-367 (2021).

#### 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

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