

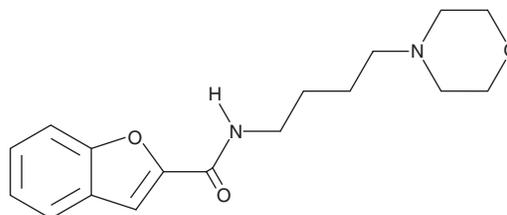
# PRODUCT INFORMATION



**CL 82,198**

Item No. 16928

**CAS Registry No.:** 307002-71-7  
**Formal Name:** N-[4-(4-morpholinyl)butyl]-2-benzofurancarboxamide  
**MF:** C<sub>17</sub>H<sub>22</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 302.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 270 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

CL 82,198 is supplied as a crystalline solid. A stock solution may be made by dissolving the CL 82,198 in the solvent of choice, which should be purged with an inert gas. CL 82,198 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CL 82,198 in these solvents is approximately 25, 2.5, and 3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of CL 82,198 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CL 82,198 in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

## Description

CL 82,198 is a selective inhibitor of human collagenase-3, also known as matrix metalloproteinase-13 (MMP-13), producing 89% inhibition at 10 μg/ml.<sup>1</sup> It is without effect against MMP-1, MMP-9 or TNF-α converting enzyme.<sup>1</sup> CL 82,198 is used to evaluate the role of MMP-13 in diverse processes, including cancer cell migration, acute lung injury, and joint degeneration associated with osteoarthritis.<sup>2-4</sup>

## References

1. Chen, J.M., Nelson, F.C., Levin, J.I., *et al.* Structure-based design of a novel, potent, and selective inhibitor for MMP-13 utilizing NMR spectroscopy and computer-aided molecular design. *J. Am. Chem. Soc.* **122**, 9648-9654 (2000).
2. Rath, T., Stöckle, J., Roderfeld, M., *et al.* Matrix metalloproteinase-13 is regulated by toll-like receptor-9 in colorectal cancer cells and mediates cellular migration. *Oncol. Lett.* **2(3)**, 483-488 (2011).
3. Wohlaer, M., Moore, E.E., Silliman, C.C., *et al.* Nebulized hypertonic saline attenuates acute lung injury following trauma and hemorrhagic shock via inhibition of matrix metalloproteinase-13. *Crit. Care* **40(9)**, 2647-2653 (2012).
4. Wang, M., Sampson, E.R., Jin, H., *et al.* MMP13 is a critical target gene during the progression of osteoarthritis. *Arthritis Res. Ther.* **15(1)**, 1-11 (2013).

### 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.

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## 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