

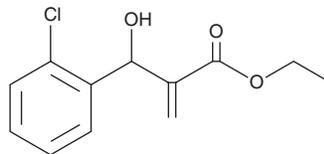
PRODUCT INFORMATION



INF4E

Item No. 42315

CAS Registry No.: 88039-46-7
Formal Name: 2-chloro- β -hydroxy- α -methylene-benzenepropanoic acid, ethyl ester
MF: C₁₂H₁₃ClO₃
FW: 240.7
Purity: \geq 98%
Supplied as: A liquid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

INF4E is supplied as a liquid. A stock solution may be made by dissolving the INF4E in the solvent of choice, which should be purged with an inert gas. INF4E is soluble (\geq 10 mg/ml) in ethanol and DMSO.

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 INF4E can be prepared by directly dissolving the liquid in aqueous buffers. INF4E is soluble (\geq 10 mg/ml) in PBS (pH 7.2).

Description

INF 4E is an inhibitor of NOD-like receptor protein 3 (NLRP3 inflammasome).¹ It inhibits the NLRP3 inflammasome by 51.8% when used at a concentration of 10 μ M. INF 4E also inhibits caspase 1 (K_i = 10.6 μ M). It is active against *S. aureus*, *C. diphtheriae*, *K. pneumoniae*, and *E. coli*, (MICs = 18, 18, 18, and 16 μ g/ml, respectively) and the fungus *C. albicans* (MIC = 13 μ g/ml).² INF 4E (10 μ M) inhibits ATP-induced pyroptosis in THP-1 acute monocytic leukemia cells differentiated by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) and stimulated by LPS but does induce cytotoxicity in HK-2 kidney epithelial cells (IC_{50} = 67 μ M).¹ It inhibits increases in IL-1 β , IL-18, TNF- α , and gasdermin D (GSDMD) induced by amyloid- β (1-42) (A β 42) in SH-SY5Y neuroblastoma cells when used at a concentration of 10 μ M.³

References

1. Cocco, M., Garella, D., Di Stilo, A., *et al.* Electrophilic warhead-based design of compounds preventing NLRP3 inflammasome-dependent pyroptosis. *J. Med. Chem.* **57**(24), 10366-10382 (2014).
2. Singh, S.A. and Bhat, S.V. Antimicrobial potential of 3-hydroxy-2-methylene-3-phenylpropionic acid derivatives. *Acta Pharm.* **61**(4), 447-455 (2011).
3. Nopparat, C., Boontor, A., Kutpruek, S., *et al.* The role of melatonin in amyloid beta-induced inflammation mediated by inflammasome signaling in neuronal cell lines. *Sci. Rep.* **13**(1), 17841 (2023).

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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