

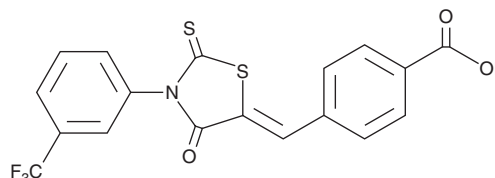
PRODUCT INFORMATION



CFTR Inhibitor-172

Item No. 15545

CAS Registry No.: 307510-92-5
Formal Name: 4-[[4-oxo-2-thioxo-3-[3-(trifluoromethyl)phenyl]-5-thiazolidinylidene)methyl]-benzoic acid
Synonyms: CFTR(inh)-172, Cystic Fibrosis Transmembrane Conductance Regulator Inhibitor 172
MF: C₁₈H₁₀F₃NO₃S₂
FW: 409.4
Purity: ≥98%
UV/Vis.: λ_{max}: 278, 381 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

CFTR inhibitor-172 is supplied as a crystalline solid. A stock solution may be made by dissolving the CFTR inhibitor-172 in the solvent of choice, which should be purged with an inert gas. CFTR inhibitor-172 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CFTR inhibitor-172 in these solvents is approximately 5 mg/ml.

Description

The cystic fibrosis (CF) gene encodes a cAMP-regulated chloride channel, the CF transmembrane conductance regulator (CFTR).¹ CFTR inhibitor-172 is a thiazolidinone that selectively blocks the CFTR channel (K_i = 300 nM) in a voltage-independent manner.² It appears to directly modulate the gating of chloride at the channel and does not prevent elevation of cAMP or inhibit other pumps or channels.^{2,3} In mice, CFTR inhibitor-172 prevents cholera toxin-induced fluid secretion in the small intestine, when given by intraperitoneal injection.^{2,4} It slows cyst growth in animal models of polycystic kidney disease.⁵ As CFTR also modulates glutathione (GSH) efflux, CFTR inhibitor-172 can affect intracellular GSH concentration and reactive oxygen species balance.⁶⁻⁸

References

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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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