

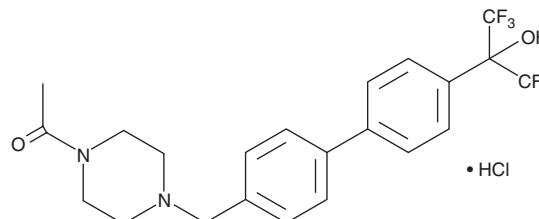
PRODUCT INFORMATION



SR 1555 (hydrochloride)

Item No. 12071

CAS Registry No.: 2309312-90-9
Formal Name: 1-[4-[[4'-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl][1,1'-biphenyl]-4-yl]methyl]-1-piperazinyl]-ethanone, monohydrochloride
MF: C₂₂H₂₂F₆N₂O₂ • HCl
FW: 496.9
Purity: ≥98%
UV/Vis.: λ_{max}: 203, 257 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

SR 1555 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SR 1555 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SR 1555 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SR 1555 (hydrochloride) in these solvents is approximately 1.6, 3, and 5 mg/ml, respectively.

SR 1555 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SR 1555 (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SR 1555 (hydrochloride) has a solubility of approximately 0.16 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Retinoic acid receptor-related nuclear receptor γ (ROR γ) plays a central role in T cell differentiation, particularly in the development of T_H17 cells, which are implicated in autoimmune diseases like multiple sclerosis and rheumatoid arthritis.^{1,2} SR 1555 is a selective ligand of ROR γ (IC₅₀ = 1 μ M).³ It does not bind ROR α , LXR, or FXR. SR 1555 acts as an inverse agonist of ROR γ , inhibiting endogenous IL-17A gene expression in mouse splenocytes and suppressing differentiation of T_H17 cells when cultured under T_H17 polarizing conditions.³ Moreover, SR 1555 stimulates T regulatory development when cultured under T regulatory polarizing conditions, unlike digoxin and ursolic acid.³

References

1. Ivanov, I.I., McKenzie, B.S., Zhou, L., *et al.* The orphan nuclear receptor ROR γ t directs the differentiation program of proinflammatory IL-17+ T helper cells. *Cell* **126(6)**, 1121-1133 (2006).
2. Solt, L.A., Kumar, N., Nuhant, P., *et al.* Suppression of TH17 differentiation and autoimmunity by a synthetic ROR ligand. *Nat. Lett.* **472(7344)**, 491-4 (2011).
3. Solt, L.A., Kumar, N., He, Y., *et al.* Identification of a selective ROR γ ligand that suppresses TH17 cells and stimulates T regulatory cells. *ACS Chem. Biol.* **7(9)**, 1515-1519 (2012).

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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