

# PRODUCT INFORMATION

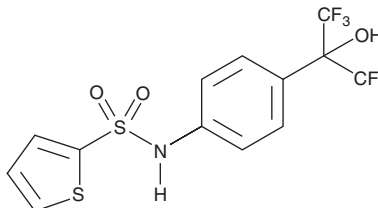


**SR 3335**

Item No. 12072

**CAS Registry No.:** 293753-05-6  
**Formal Name:** N-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]phenyl]-2-thiophenesulfonamide

**Synonym:** ML 176  
**MF:** C<sub>13</sub>H<sub>9</sub>F<sub>6</sub>NO<sub>3</sub>S<sub>2</sub>  
**FW:** 405.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 231 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 3335 is supplied as a crystalline solid. A stock solution may be made by dissolving the SR 3335 in the solvent of choice, which should be purged with an inert gas. SR 3335 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SR 3335 in these solvents is approximately 33, 16, and 20 mg/ml, respectively.

SR 3335 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SR 3335 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SR 3335 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

The retinoic acid receptor-related receptors (RORs) are orphan nuclear receptors with diverse putative roles.<sup>1-3</sup> SR 3335 is a selective inverse agonist of ROR $\alpha$ , competitively inhibiting the binding of 25-hydroxycholesterol to the ligand binding domain ( $K_i = 220$  nM) and inhibiting constitutive transactivation activity ( $IC_{50} = 480$  nM).<sup>4</sup> It is without effect on ROR $\beta$ , ROR $\gamma$ , farnesoid X receptor, or liver X receptor  $\alpha$ . SR 3335 evokes ROR $\alpha$ -dependent effects both *in vitro* and *in vivo*, altering gene expression as well as gluconeogenesis.<sup>4</sup>

## References

1. Solt, L.A., Kumar, N., Nuhant, P., *et al.* Suppression of T<sub>H</sub>17 differentiation and autoimmunity by a synthetic ROR ligand. *Nature* **472(7344)**, 491-494 (2011).
2. Jetten, A.M. and Ueda, E. Retinoid-related orphan receptors (RORs): Roles in cell survival, differentiation and disease. *Cell Death Differ.* **9(11)**, 1167-1171 (2002).
3. Ivanov, I.I., McKenzie, B.S., Zhou, L., *et al.* The orphan nuclear receptor ROR $\gamma$ t directs the differentiation program of proinflammatory IL-17<sup>+</sup> T helper cells. *Cell* **126(6)**, 1121-1133 (2006).
4. Kumar, N., Kojetin, D.J., Solt, L.A., *et al.* Identification of SR3335 (ML176): A synthetic ROR $\alpha$  selective inverse agonist. *ACS Chem. Biol.* **6(3)**, 218-222 (2011).

### 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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