

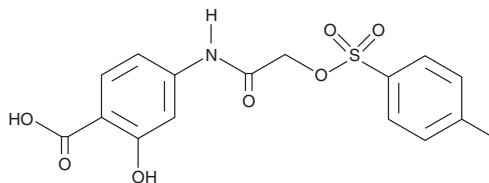
# PRODUCT INFORMATION



## S3I-201

Item No. 14336

**CAS Registry No.:** 501919-59-1  
**Formal Name:** 2-hydroxy-4-[[2-[[[4-methylphenyl]sulfonyl]oxy]acetyl]amino]-benzoic acid  
**Synonym:** NSC 74859  
**MF:** C<sub>16</sub>H<sub>15</sub>NO<sub>7</sub>S  
**FW:** 365.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 219, 268, 309 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

S3I-201 is supplied as a crystalline solid. A stock solution may be made by dissolving the S3I-201 in the solvent of choice. S3I-201 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of S3I-201 in these solvents is approximately 16 and 12.5 mg/ml, respectively.

S3I-201 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, S3I-201 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. S3I-201 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Signal transducers and activators of transcription (STATs) are a family of latent cytoplasmic transcription factors that convey signals from the cell membrane to the nucleus. In various human tumors, STAT3 is constitutively activated by aberrant upstream tyrosine kinase activities.<sup>1</sup> STAT signaling is also suspected to play a role in vascular disease since it can be activated through angiotensin II type 1 receptors or the inflammatory mediator interleukin (IL)-6.<sup>2</sup> S3I-201 is an inhibitor of STAT3 transcription factor activation, dimerization, and gene transcription. It can suppress IL-6-induced phosphorylation of STAT3 in T cells with an IC<sub>50</sub> value of 38 μM.<sup>3</sup> Inhibiting STAT3 activation with 10 μM S3I-201 was demonstrated to be protective against angiotensin II-induced oxidative stress, endothelial dysfunction, and hypertension in two different models of vascular disease.<sup>2</sup> At 10 μM, S3I-201 has also been used as a means to regress cardiac hypertrophy by inhibiting collagen biosynthesis and decreasing atrial natriuretic factor and β-myosin heavy chain in an *in vitro* model.<sup>4</sup>

### References

- Schust, J., Sperl, B., Hollis, A., *et al.* *Chem. Biol.* **13(11)**, 1235-1242 (2006).
- Johnson, A.W., Kinzenbaw, D.A., Modrick, M.L., *et al.* *Hypertension* **61(2)**, 437-442 (2013).
- Zhang, S., Zheng, M., Kibe, R., *et al.* *FASEB J.* **25(7)**, 2387-2398 (2011).
- Mir, S.A., Chatterjee, A., Mitra, A., *et al.* *J. Biol. Chem.* **287(4)**, 2666-2677 (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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