

# PRODUCT INFORMATION



## W146 (trifluoroacetate salt)

Item No. 10009109

CAS Registry No.: 909725-62-8

Formal Name: [3R-amino-4-[(3-hexylphenyl)amino]-4-oxobutyl]-phosphonic acid, mono(trifluoroacetate)

MF:  $C_{16}H_{27}N_2O_4P \cdot CF_3COOH$

FW: 456.4

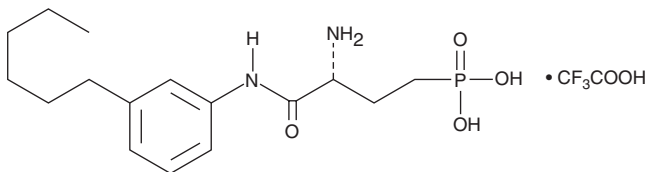
Purity:  $\geq 95\%$

UV/Vis.:  $\lambda_{max}$ : 205, 245 nm

Supplied as: A crystalline solid

Storage:  $-20^\circ C$

Stability:  $\geq 2$  years



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

### Laboratory Procedures

W146 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the W146 (trifluoroacetate salt) in the solvent of choice. W146 (trifluoroacetate salt) is soluble in the organic solvent methanol, which should be purged with an inert gas, at a concentration of approximately 0.1 mg/ml.

### Description

Sphingosine-1-phosphate (S1P) is a bioactive lipid that exhibits a broad spectrum of biological activities including cell proliferation, survival, migration, cytoskeletal organization, and morphogenesis.<sup>1-3</sup> It exerts its activity by binding to five distinct G protein-coupled receptors, S1P<sub>1</sub>/EDG-1, S1P<sub>2</sub>/EDG-5, S1P<sub>3</sub>/EDG-3, S1P<sub>4</sub>/EDG-6, and S1P<sub>5</sub>/EDG-8.<sup>1,2</sup> W146 is a S1P<sub>1</sub> receptor antagonist that exhibits a  $K_i$  value of 77 nM for the human receptor in a GTP- $\gamma S$  binding assay with equipotency at the murine S1P<sub>1</sub> receptor (2a = W146; 2b = W140 in supplemental material).<sup>4</sup> No agonist or antagonist activity was observed at 10  $\mu M$  W146 at S1P<sub>2</sub>, S1P<sub>3</sub>, or S1P<sub>5</sub> receptors. W146 is active *in vivo* causing skin capillary leakage in murine lung and skin as well as inhibition of S1P<sub>1</sub> agonist-induced lymphocyte sequestration. The half-life of W146 in rat blood is 73 minutes.

### References

1. Takuwa, Y., Takuwa, N., and Sugimoto, N. The Edg family G protein-coupled receptors for lysophospholipids: Their signaling properties and biological activities. *J. Biochem.* **131**, 767-771 (2002).
2. Ishii, I., Fukushima, N., Ye, X., *et al.* Lysophospholipid receptors: Signaling and biology. *Annu. Rev. Biochem.* **73**, 321-354 (2004).
3. Kluk, M.J. and Hla, T. Signaling of sphingosine-1-phosphate *via* the S1P/EDG-family of G-protein-coupled receptors. *Biochim. Biophys. Acta* **1582**, 72-80 (2002).
4. Sanna, M.G., Wang, S.-K., Gonzalez-Cabrera, P.J., *et al.* Enhancement of capillary leakage and restoration of lymphocyte egress by a chiral S1P<sub>1</sub> antagonist *in vivo*. *Nature Chemical Biology* **2**(8), 434-441 (2006).

#### 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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