

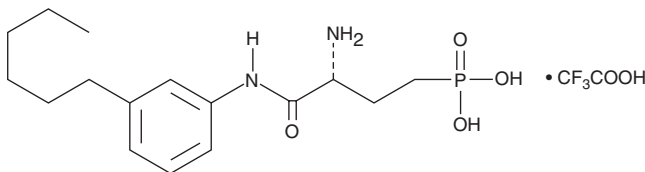
# PRODUCT INFORMATION



## 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<sub>16</sub>H<sub>27</sub>N<sub>2</sub>O<sub>4</sub>P • CF<sub>3</sub>COOH  
**FW:** 456.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 245 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

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, which should be purged with an inert gas. W146 (trifluoroacetate salt) is soluble in the organic solvent methanol at a concentration of approximately 0.1 mg/ml.

### Description

W146 is a sphingosine-1-phosphate receptor 1 (S1P<sub>1</sub>) antagonist (K<sub>i</sub> = 77 nM).<sup>1</sup> It is selective for S1P<sub>1</sub> over S1P<sub>2</sub>, S1P<sub>3</sub>, and S1P<sub>5</sub> receptors (K<sub>i</sub>s = >10 μM for all). W146 prevents ligand-induced receptor internalization in CHO cells and inhibits the phosphorylation of ERK1 and Akt when used at a concentration of 10 μM. W146 (5 mg/kg) increases AMD3100-induced Kit<sup>+</sup>/Sca-1<sup>+</sup>/Lin<sup>-</sup> hematopoietic stem progenitor cell (KSL-HSPC) entrance into mouse blood circulation from the bone marrow when administered in combination with the chemokine (C-X-C motif) receptor 4 (CXCR4) antagonist and stem cell-mobilizer AMD3100.<sup>2</sup> Intranasal or intradermal administration of W146 (10 μg) also disrupts the endothelial barrier and induces the infiltration of polymorphonuclear (PMN) neutrophils into the lungs and skin in an ovalbumin-induced mouse model of immune cell-mediated vascular injury.<sup>3</sup>

### References

1. 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*. *Nat. Chem. Bio.* **2**(8), 434-441 (2006).
2. Liu, J., Zhao, J., Lee, J.-F., *et al.* 3-Amino-4-(3-hexylphenylamino)-4-oxobutyl phosphonic acid (W146), a selective antagonist of sphingosine-1-phosphate receptor subtype 1, enhances AMD3100-stimulated mobilization of hematopoietic stem progenitor cells in animals. *J. Biochem. Pharmacol. Res.* **1**(4), 197-203 (2013).
3. Burg, N., Swendeman, S., Worgall, S., *et al.* Sphingosine 1-phosphate receptor 1 signaling maintains endothelial cell barrier function and protects against immune complex-induced vascular injury. *Arthritis Rheumatol.* **70**(11), 1879-1889 (2018).

#### 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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