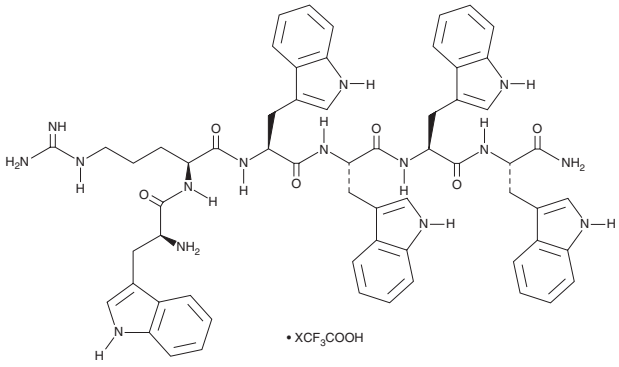
PRODUCT INFORMATION

WRW4 (trifluoroacetate salt)

Item No. 36763

Formal Name:	L-tryptophyl-L-arginyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophanamide, trifluoroacetate salt
Synonyms:	Trp-Arg-Trp-Trp-Trp-Trp-$CONH_2$, Trp-Arg-Trp-Trp-Trp-Trp-NH_2, WRWWWW-NH_2
MF:	$C_{61}H_{65}N_{15}O_6 \bullet XCF_3COOH$
FW:	1,104.3
Purity:	≥98%
Supplied as:	A 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

WRW4 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the WRW4 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. WRW4 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of WRW4 (trifluoroacetate salt) in these solvents is approximately 20, 10, and 12 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of WRW4 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of WRW4 (trifluoroacetate salt) in PBS (pH 7.2) is approximately 0.20 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

WRW4 is a peptide antagonist of formyl peptide receptor 2 (FPR2; IC_{50} = 0.23 µM) and FPR3, previously known as FPR-like 1 (FPRL1) and FPRL2, respectively.[1,2] It inhibits increases in intracellular calcium and chemotaxis induced by the FPR1 and FPR2 agonist WKYMVm (Item No. 33589) in RBL-2H3 cells expressing FPR2 and by the FPR3 agonist F2L in isolated human monocytes when used at a concentration of 10 µM. WRW4 (10 µM) also prevents the production of superoxide induced by amyloid-β (1-42) (Aβ42; Item No. 20574) in isolated human neutrophils.[1] *In vivo*, WRW4 (1 mg/kg) increases lung edema and bronchoalveolar lavage fluid (BALF) protein levels in the absence and presence of the antibiotic ceftriaxone (Item No. 18866) in a mouse model of acute lung injury induced by *S. pneumoniae*.[3]

References

1. Bae, Y.-S., Lee, H.Y., Jo, E.J., *et al.* Identification of peptides that antagonize formyl peptide receptor-like 1-mediated signaling. *J. Immunol.* **173(1)**, 607-614 (2004).
2. Shin, E.H., Lee, H.-Y., Kim, S.D., *et al.* Trp-Arg-Trp-Trp-Trp-Trp antagonizes formyl peptide receptor like 2-mediated signaling. *Biochem. Biophys. Res. Commun.* **341(4)**, 1317-1322 (2006).
3. Siegel, E.R., Croze, R.H., Fang, X., *et al.* Inhibition of the lipoxin A4 and resolvin D1 receptor impairs host response to acute lung injury caused by pneumococcal pneumonia in mice. *Am. J. Physiol. Lung Cell Mol. Physiol.* **320(6)**, L1085-L1092 (2021).

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