

PRODUCT INFORMATION



Spadin (trifluoroacetate salt)

Item No. 36762

Formal Name:	L-tyrosyl-L-alanyl-L-prolyl-L-leucyl-L-prolyl-L-arginyl-L-tryptophyl-L-serylglycyl-L-prolyl-L-isoleucylglycyl-L-valyl-L-seryl-L-tryptophylglycyl-L-leucyl-L-arginine, trifluoroacetate salt	H-Tyr-Ala-Pro-Leu-Pro-Arg-Trp-Ser-Gly-Pro-Ile-Gly-Val-Ser-Trp-Gly-Leu-Arg-OH
Synonym:	YAPLPRWSGPIGVSWGLR	
MF:	$C_{96}H_{142}N_{26}O_{22} \cdot XCF_3COOH$	
FW:	2,012.3	
Purity:	≥98%	• XCF ₃ COOH
UV/Vis.:	λ_{max} : 218 nm	
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

Spadin (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the spadin (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Spadin (trifluoroacetate salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of spadin (trifluoroacetate salt) in these solvents is approximately 5 and 3 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 spadin (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of spadin (trifluoroacetate salt) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Spadin is an inhibitor of the two-pore domain potassium channel $K_{2p2.1}/TREK1$ ($K_i = 10$ nM in homogenates from COS-7 cells expressing $K_{2p2.1}/TREK1$) that corresponds to amino acids 12-28 of human sortilin, also known as the neurotensin-3 receptor (NTS₃).¹ It also binds to sortilin in C13NJ microglial cells ($K_i = 8$ nM). Spadin inhibits currents induced by arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) in COS-7 cells expressing $K_{2p2.1}/TREK1$ ($IC_{50} = 70.7$ nM). It decreases immobility time in the forced swim test in mice.

Reference

1. Mazella, J., Pétrault, O., Lucas, G., *et al.* Spadin, a sortilin-derived peptide, targeting rodent TREK-1 channels: A new concept in the antidepressant drug design. *PLoS Biol.* **8**(4), e1000355 (2010).

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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