Product Data Sheet

Product Name:	Capsiconiate
Cat. No.:	GC12636

Chemical Properties

Cas. No.	946572-73-2		
Chemical Name	8-methyl-6E-nonenoic acid 3-(4-hydroxy-3-methoxyphenyl)-2E-propen-1-yl ester		
SMILES	COC1=C(O)C=CC(/C=C/COC(CCCC/C=C/C(C)C)=O)=C1		
Formula	$C_{20}H_{28}O_4$	M.Wt	332.4
Solubility	≤20mg/ml in ethanol;20mg/ml in DMSO;20mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Capsiconiate		

Background

EC50: 3.2 μM for TRPV1

Capsiconiate is a TRPV1 agonist.

The capsaicin receptor, also termed as transient receptor potential vanilloid type 1 (TRPV1), is an non-selective cation, calcium permeable channel. The activation of TRPV1 has been reported to contribute to the various physiological activities of capsaicin.

In vitro: Capsiconiate was isolated from the fruits of the pepper, Capsicum baccatum L. var. praetermissum. The agonist activity of the capsiconiate for TRPV1 was evaluated by conducting an analysis of the intracellular calcium concentrations in TRPV1-expressing HEK293 cells. The EC50 value of capsiconiate was determined to be 3.2 microM. However, the activity was weaker than that of capsaicinor capsiate. It was found that capsiconiate had no pungency, and therefore, the low activity could be explained on the

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basis of the structure-activity relationship. The instability capsiconiate in aqueous solvents might also be responsible for its low activity. Even though the agonist activity for TRPV1 was lower than that of capsaicin, its activity was comparable with that of other naturally occurring compounds such as gingerol, piperine, and capsaicinol [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Kobata, K. ,Tate, H.,Iwasaki, Y., et al. Isolation of coniferyl esters from Capsicum baccatum L., and their enzymatic preparation and agonist activity for TRPV1. Phytochemistry 69(5), 1179-1184 (2008).