Flagelin 22(TFA)

Cat. No.:	HY-P1568A		
Molecular Formula:	$C_{95}H_{163}F_3N_{32}O_{36}$		
Molecular Weight:	2386.5		
Target:	Bacterial		
Pathway:	Anti-infection		
Storage:	Powder	-80°C	2 years
		-20°C	1 year
	In solvent	-80°C	6 months
		-20°C	1 month

BIOLOGICAL ACTIVITY

Description	Flagelin 22 TFA (Flagellin 22 TFA), a fragment of bacterial flagellin, is an effective elicitor in both plants and algae.
In Vitro	Flagelin 22 (flg22) is a 22-amino-acid peptide, which corresponds to the highly conserved N-terminal region of flagellin, can induce immunity reaction in various plants such as tomato (Solanum lycopersicum), potato (Solanum tuberosum), tobacco (Nicotiana tabacum), and Arabidopsis thaliana. Flagelin 22 can induce oxidative bursts and hypersensitive responses (HR) in both female gametophytes and sporophytes of Saccharina japonica, indicating that algae and plants may share similar mechanisms for recognizing pathogens. After culturing the female gametophytes of S. japonica in the presence of Flagelin 22, flg15, flg14, and flg22D43A for 40 days, both Flagelin 22 and flg15 significantly induce growth inhibition of the algae at a concentration of 1 μM. The fresh weights of Flagelin 22- and flg15-challenged female gametophytes are less than one half of the control[1].

PROTOCOL

Cell Assay [1]	One milliliter of the **female gametophytes** is added to 100 mL sterilized seawater containing **1 μM** of **Flagelin 22**, flg15, flg14, and flg22D43A, respectively. Controls are sterilized seawater and 0.1% BSA in sterilized seawater. Gametophytes are grown at 10°C with a 24-h photoperiod at 50 μmol photons m^{-2} s^{-1}. Sterilized seawater medium is provided with 0.2 mM KNO_3, 0.02mM KH_2PO_4, and 1 μM of the four respective peptides and refreshed every week. The gametophytes are briefly blotted dry, and the fresh weight is measured after 40 days[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bojun Lu, et al. Defense responses in female gametophytes of Saccharina japonica (Phaeophyta) induced by flg22-derived peptides. Journal of Applied Phycology (2016), 28(3), 1793-1801.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA