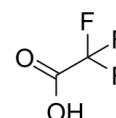


Data Sheet

Product Name:	Flagelin 22(TFA)
Cat. No.:	CS-0059301
Molecular Formula:	C ₉₅ H ₁₆₃ F ₃ N ₃₂ O ₃₆
Molecular Weight:	2386.50
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	H ₂ O : ≥ 50 mg/mL (20.95 mM)

QRLSTGSRINSAKDDAAGLQIA



BIOLOGICAL ACTIVITY:

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 μ M. The fresh weights of Flagelin 22- and flg15-challenged female gametophytes are less than one half of the control^[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: ^[1]One milliliter of the **female gametophytes** is added to 100 mL sterilized seawater containing **1 μ M** 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 μ mol photons $m^{-2} s^{-1}$. Sterilized seawater medium is provided with 0.2 mM KNO₃, 0.02mM KH₂PO₄, and 1 μ M 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].

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.

CAIndexNames:

Flagelin 22(TFA)

SMILES:

O=C(O)C(F)(F)F.[QRLSTGSRINSAKDDAAGLQIA]

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA