

β-defesin 1 (pig) (TFA)

Cat. No.:	HY-P2289A
Molecular Formula:	C ₁₈₀ H ₃₁₃ N ₅₉ O ₅₀ S ₉ ·10C ₂ HF ₃ O ₂
Molecular Weight:	5532.56
Sequence:	Met-Arg-Leu-His-Arg-Leu-Leu-Leu-Val-Phe-Leu-Leu-Met-Val-Leu-Leu-Pro-Val-Pro-Gly-Leu-Leu-Lys-Asn-Ile-Gly-Asn-Ser-Val-Ser-Cys-Leu-Arg-Asn-Lys-Gly-Val-Cys-Met-Pro-Gly-Lys-Cys-Ala-Pro-Lys-Met-Lys-Gln-Ile-Gly-Thr-Cys-Gly-Met-Pro-Gln-Val-Lys-Cys-Cys-Lys-Arg-Lys <small>NIGNSVSLRNKGVCMGKCAPKMKQIGTCGMPQVKCKRK (disulfide bridge:Cys1-Cys5,Cys2-Cys4,Cys3-Cys6) (TFA salt)</small>
Sequence Shortening:	NIGNSVSLRNKGVCMGKCAPKMKQIGTCGMPQVKCKRK (disulfide bridge:Cys1-Cys5, Cys2-Cys4,Cys3-Cys6)
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Sealed storage, away from moisture and light Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (18.07 mM; Need ultrasonic)
 H₂O : 25 mg/mL (4.52 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent	1 mg	5 mg	10 mg
	Concentration			
	1 mM	0.1807 mL	0.9037 mL	1.8075 mL
	5 mM	0.0361 mL	0.1807 mL	0.3615 mL
	10 mM	0.0181 mL	0.0904 mL	0.1807 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

β-defesin 1 (pig) (pBD-1) TFA is an endogenous and constitutively expressed antimicrobial peptide (AMP) from porcine tissues, particularly expresses in pig mucosal epithelial sites. β-defesin 1 (pig) TFA has antimicrobial activities and contributes to mucosal and systemic host defenses in pigs^[1].

IC₅₀ & Target

IC50: bacterial^[1]

In Vitro

In a northern blot analysis, β-defesin 1 (pig) TFA mRNA only expresses in ongue epithelial tissues from 4-5 week old pigs^[1]. In RT-PCR analysis, β-defesin 1 (pig) TFA message throughout the epithelia of the respiratory (from nasal septum to lung)

and gastrointestinal (from esophagus to rectum) tracts. In addition, it is detected in thymus, spleen, lymph node, brain, liver, kidney, urinary bladder, testis, skin, heart, muscle, bone marrow, alveolar macrophages, peripheral blood neutrophils and the umbilical cord. The only cells evaluated that does not express β -defensin 1 (pig) TFA are peripheral blood mononuclear cells^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zhang G, et al. Molecular cloning and tissue expression of porcine beta-defensin-1. FEBS Lett. 1998 Mar 6;424(1-2):37-40.

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

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