

## Katacalcin TFA

Cat. No.:	HY-P0149A
Molecular Formula:	C <sub>99</sub> H <sub>155</sub> F <sub>3</sub> N <sub>34</sub> O <sub>38</sub> S <sub>2</sub>
Molecular Weight:	2550.62
Sequence:	Asp-Met-Ser-Ser-Asp-Leu-Glu-Arg-Asp-His-Arg-Pro-His-Val-Ser-Met-Pro-Gln-Asn-Ala-A sn
Sequence Shortening:	DMSSDLERDHRPHVSMQPQAN
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture Powder    -80°C    2 years -20°C    1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### BIOLOGICAL ACTIVITY

Description	Katacalcin TFA (PDN 21 TFA) is a potent plasma calcium-lowering peptide <sup>[1]</sup> .
In Vitro	Katacalcin is a potent plasma calcium lowering peptide. Katacalcin belongs to the calcitonin family, that causes a rapid but short-lived drop in the level of calcium and phosphate in blood by promoting the incorporation of these ions in the bones <sup>[1]</sup> . Katacalcin (KC) belongs to a small family of polypeptides that are encoded by the calc-1 gene and also include calcitonin (CT) and procalcitonin NH <sub>2</sub> -terminal cleavage peptide (N-ProCT). Katacalcin pretreatment leads to a concentration-dependent decrease at concentrations between 1 amol/liter and 10 fmol/liter and is a more potent inhibitor of fMLP-induced chemotaxis than CT or procalcitonin (PCT). Katacalcin deactivates CD14 <sup>+</sup> peripheral blood mononuclear cell (PBMC) chemotaxis not only toward N-formyl-Met-Leu-Phe (fMLP) but also toward other attractants of the chemokine family (heterologous deactivation) as well as toward PCT and CT. Pretreatment of CD14 <sup>+</sup> PBMCs with Katacalcin also deactivates subsequent chemotaxis toward Katacalcin itself. Katacalcin elicits concentration-dependent migration of CD14 <sup>+</sup> PBMC at concentrations from the atomolar to the micromolar range and deactivates attractant-induced chemotaxis. Katacalcin regulates human CD14 <sup>+</sup> PBMC migration via signaling events involving protein kinase A-dependent cAMP pathways <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Hillyard CJ, et al. Katacalcin: a new plasma calcium-lowering hormone. *Lancet*. 1983 Apr 16;1(8329):846-8.

[2]. Kaneider NC, et al. Involvement of cyclic adenosine monophosphate-dependent protein kinase A and pertussis toxin-sensitive G proteins in the migratory response of human CD14<sup>+</sup> mononuclear cells to katacalcin. *J Bone Miner Res*. 2002 Oct;17(10):1872-82.

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

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