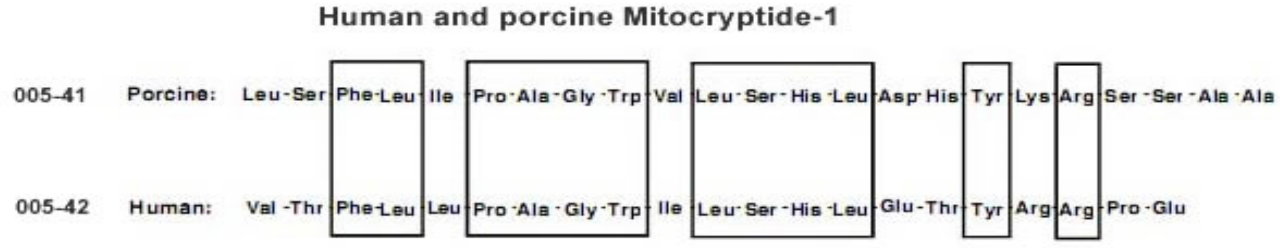
Mitocryptide-1
A Neutrophil-Activating Cryptide



Although neutrophils are known to migrate in response to various chemokines and complement factors, the substances involved in the early stages of their transmigration and activation have been poorly characterized to date. Here we report the discovery of a peptide isolated from healthy porcine hearts that activated neutrophils. Its primary structure is H-Leu-Ser-Phe-Leu-Ile-Pro-Ala-Gly-Trp-Val-Leu-Ser-His-Leu-Asp-His-Tyr-Lys-Arg-Ser-Ser-Ala-Ala-OH, and it was indicated to originate from mitochondrial cytochrome c oxidase subunit VIII. This peptide caused chemotaxis at concentrations lower than that inducing β-hexosaminidase release. Such responses were observed in neutrophilic/granulocytic differentiated HL-60 cells but not in undifferentiated cells, and Gi2-type G proteins were suggested to be involved in the peptide signaling. Moreover the peptide activated human neutrophils to induce β-hexosaminidase secretion. A number of other amphipathic neutrophil-activating peptides presumably originating from mitochondrial proteins were also found. The present results suggest that neutrophils monitor such amphipathic peptides including the identified peptide as an initiation signal for inflammation at injury sites.

Mukai H, et al. J. Biol. Chem., Vol. 283, Issue 45, 30596-30605, November 7, 2008

Available Products

Catalog Number	Description	Std. Size
005-41	MCT-1 (Porcine)	100ug
005-42	MCT-1 (Human)	100ug

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