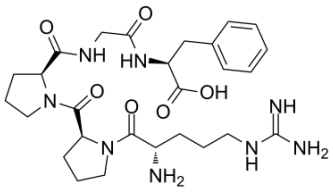
Bradykinin (1-5)

Cat. No.:	HY-P1488
CAS No.:	23815-89-6
Molecular Formula:	$C_{27}H_{40}N_8O_6$
Molecular Weight:	572.66
Sequence:	Arg-Pro-Pro-Gly-Phe
Sequence Shortening:	RPPGF
Target:	Bradykinin Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	Bradykinin (1-5) is a major stable metabolite of Bradykinin, formed by the proteolytic action of angiotensin-converting enzyme (ACE).
In Vivo	Bradykinin is a short-lived vasoactive peptide, with a reported half-life in vivo of 17 s, that is rapidly metabolized in the circulation to Bradykinin (1-5). Bradykinin (1-5), the product of two sequential cleavages of Bradykinin by ACE at the Pro7-Phe8 and Phe5-Ser6bonds, has been identified as the major stable metabolite of Bradykinin in vivo in human subjects, with a terminal half-life of minutes. Both Bradykinin and Bradykinin (1-5) inhibit α- and γ-thrombin-induced platelet aggregation ($P<0.01$ versus baseline). Bradykinin (1-5) inhibits γ-thrombin-induced platelet aggregation 50% at a calculated dose of 183±3 pmol/min. Neither Bradykinin nor Bradykinin (1-5) affects thrombin receptor-activating peptide-induced platelet aggregation, consistent with the hypothesis that Bradykinin and Bradykinin 1-5 inhibit thrombin-induced platelet aggregation by preventing cleavage of the thrombin receptor and liberation of thrombin receptor-activating peptide. Bradykinin (1-5) significantly attenuates α-thrombin-induced platelet aggregation but not TRAP 1-6-induced platelet aggregation. Bradykinin (1-5) potently inhibits γ-thrombin (500 nM)-induced platelet aggregation with an ED_{50} of 183±2 pmol/min[1].

REFERENCES

[1]. Murphey LJ, et al. Bradykinin and its metabolite Bradykinin 1-5 inhibit thrombin-induced platelet aggregation in humans. J Pharmacol Exp Ther. 2006 Sep;318(3):1287-92.

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