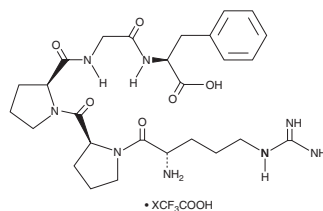


PRODUCT INFORMATION

Bradykinin Fragment (1-5) (trifluoroacetate salt)

Item No. 35302

Synonyms: Arg-Pro-Pro-Gly-Phe,
BK Fragment 1-5, RPPGF
MF: $C_{27}H_{40}N_8O_6 \cdot XCF_3COOH$
FW: 572.7
Purity: $\geq 98\%$
Supplied as: A solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Bradykinin fragment (1-5) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the bradykinin fragment (1-5) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Bradykinin fragment (1-5) (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of bradykinin fragment (1-5) (trifluoroacetate salt) in ethanol is approximately 3 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of bradykinin fragment (1-5) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of bradykinin fragment (1-5) (trifluoroacetate salt) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Bradykinin fragment (1-5) is a metabolite of the endogenous vasodilator bradykinin (Item No. 15539).¹ It is formed from bradykinin by angiotensin-converting enzyme (ACE). Bradykinin fragment (1-5) (100 nM) increases the production of nitric oxide (NO) in neonatal rat cardiomyocytes.² It inhibits α -thrombin-induced platelet aggregation of washed isolated platelets ($IC_{50} = 0.5$ mM).³ Bradykinin fragment (1-5) prevents decreases in mean arterial blood pressure and heart rate and increases survival in a rat model of LPS-induced septicemia.⁴

References

1. Bujak-Giżycka, B., Olszanecki, R., Madej, J., *et al.* Metabolism of bradykinin in aorta of hypertensive rats. *Acta Biochim. Pol.* **58**(2), 199-202 (2011).
2. Souza-Silva, I.M., de Paula, C.A., Bolais-Amos, L., *et al.* Peptide fragments of bradykinin show unexpected biological activity not mediated by B_1 or B_2 receptors. *Br. J. Pharmacol.* **179**(12), 3061-3077 (2022).
3. Hasan, A.A.K., Amenta, S., and Schmaier, A.H. Bradykinin and its metabolite, Arg-Pro-Pro-Gly-Phe, are selective inhibitors of α -thrombin-induced platelet activation. *Circulation* **94**(3), 517-528 (1996).
4. Morinelli, T.A., Webb, J.G., Jaffa, A.A., *et al.* A metabolic fragment of bradykinin, Arg-Pro-Pro-Gly-Phe, protects against the deleterious effects of lipopolysaccharide in rats. *J. Pharmacol. Exp. Ther.* **296**(1), 71-76 (2001).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM