PRODUCT INFORMATION

(Des-Arg^9)-Bradykinin

Item No. 31136

CAS Registry No.: 15958-92-6
Formal Name: 1-8-bradykinin
Synonyms: (Des-Arg^9)-BK, (Des-Arg^9)-Kallidin, (Des-Arg^9)-KD, RPPGFSPF-OH
MF: $C_{44}H_{61}N_{11}O_{10}$
FW: 904.0
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

H—Arg—Pro—Pro—Gly—Phe—Ser—Pro—Phe—OH

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

Laboratory Procedures

(Des-Arg^9)-Bradykinin is supplied as a crystalline solid. A stock solution may be made by dissolving the (Des-Arg^9)-bradykinin in the solvent of choice, which should be purged with an inert gas. (Des-Arg^9)-Bradykinin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (Des-Arg^9)-bradykinin is approximately 10 mg/ml in ethanol and approximately 15 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 (Des-Arg^9)-bradykinin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (Des-Arg^9)-bradykinin in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(Des-Arg^9)-Bradykinin is an active metabolite of the endogenous vasodilator bradykinin (Item No. 15539) and a peptide agonist of the bradykinin B_1 receptor.[1,2] It binds to bradykinin B_1 and B_2 receptors (K_is = 1.93 and 8.1 µM, respectively).[3] (Des-Arg^9)-Bradykinin is formed *via* carboxypeptidase-mediated cleavage of the bradykinin C-terminal arginine residue in plasma and tissues.[2] It induces relaxation of precontracted isolated endothelium-denuded dog renal artery strips (pD_2 = 8.6).[4] (Des-Arg^9)-Bradykinin decreases blood pressure in LPS-treated rabbits in a dose-dependent manner.[5]

References

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2. Leeb-Lundberg, L.M.F., Marceau, F., Müller-Esterl, W., *et al. Pharmacol. Rev.* **57(1)**, 27-77 (2005).
3. Hess, J.F., Borkowski, J.A., Macneil, T., *et al. Mol. Pharmacol.* **45(1)**, 1-8 (1994).
4. Rhaleb, N.E., Drapeau, G., Dion, S., *et al. Br. J. Pharmacol.* **99(3)**, 445-448 (1990).
5. Drapeau, G., deBlois, D., and Marceau, F. *J. Pharmacol. Exp. Ther.* **259(3)**, 997-1003 (1991).

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