

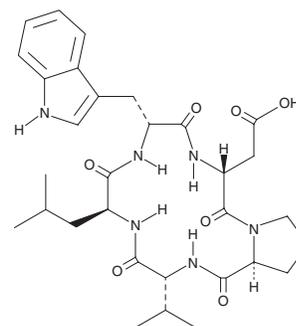
PRODUCT INFORMATION



BQ-123

Item No. 19153

CAS Registry No.: 136553-81-6
Formal Name: cyclo(D- α -aspartyl-L-prolyl-D-valyl-L-leucyl-D-tryptophyl)
Synonym: Cyclo(D-Trp-D-Asp-Pro-D-Val-Leu)
MF: C₃₁H₄₂N₆O₇
FW: 610.7
Purity: \geq 95%
UV/Vis.: λ_{max} : 221 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

BQ-123 is supplied as a crystalline solid. A stock solution may be made by dissolving the BQ-123 in the solvent of choice, which should be purged with an inert gas. BQ-123 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of BQ-123 in these solvents is approximately 20 and 1 mg/ml, respectively.

BQ-123 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BQ-123 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BQ-123 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BQ-123 is a peptide endothelin type A (ET_A) receptor antagonist (IC₅₀ = 7.3 nM).¹ It is selective for ET_A over ET_B receptors (K_s = 0.025 and 31 μ M, respectively).² BQ-123 inhibits growth of human pulmonary artery smooth muscle cells induced by endothelin-1 (ET-1; Item No. 24127).³ It reverses ET-1-induced increases in mean arterial pressure (MAP) in rats.⁴ BQ-123 (3 mg/kg, i.v.) also delays seizure onset and reduces the number of rats with major seizures in a model of epilepsy induced by pentylenetetrazole (PTZ; Item No. 18682).⁵

References

1. Ihara, M., Noguchi, K., Saeki, T., *et al.* Biological profiles of highly potent novel endothelin antagonists selective for the ET_A receptor. *Life Sci.* **50(4)**, 247-255 (1992).
2. Sakamoto, A., Yanagisawa, M., Sawamura, T., *et al.* Distinct subdomains of human endothelin receptors determine their selectivity to endothelin_A-selective antagonist and endothelin_B-selective agonists. *J. Biol. Chem.* **268(12)**, 8547-8553 (1993).
3. Zamora, M.A., Dempsey, E.C., Walchak, S.J., *et al.* BQ123, an ET_A receptor antagonist, inhibits endothelin-1-mediated proliferation of human pulmonary artery smooth muscle cells. *Am. J. Respir. Cell Mol. Biol.* **9(4)**, 429-433 (1993).
4. Warner, T.D., Allcock, G.H., and Vane, J.R. Reversal of established responses to endothelin-1 *in vivo* and *in vitro* by the endothelin receptor antagonists, BQ-123 and PD 145065. *Br. J. Pharmacol.* **112(1)**, 207-213 (1994).
5. Erdogan, H., Ekici, F., Katar, M., *et al.* The protective effects of endothelin_A receptor antagonist BQ-123 in pentylenetetrazole-induced seizure in rats. *Hum. Exp. Toxicol.* **33(10)**, 1008-1016 (2014).

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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