

Product Information

BQ-123

sodium salt

Catalog Number **B150**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 136553-81-6 (free acid),
136655-57-7 (1:1 sodium salt)

Synonyms: Cyclo(D-Trp-D-Asp-L-Pro-D-Val-L-Leu),
2-[(3R,6R,9S,12R,15S)-6-(1H-indol-3-ylmethyl)-
9-(2-methylpropyl)-2,5,8,11,14-pentaoxo-12-propan-
2-yl-1,4,7,10,13-pentazabicyclo[13.3.0]octadecan-
3-yl]acetic acid

Product Description

BQ-123 is a cyclic peptide, composed of five amino acids. The amino acid sequence is D-tryptamine-D-aspartic acid-L-proline-D valine-L-leucine.¹

BQ-123 is an endothelin receptor antagonist, and as such, has been used to investigate the physiological and pathophysiological roles of the endothelins, because of the regulatory effect of endothelin on blood pressure.

The pharmacology of BQ-123 has been studied in many *in vitro* and *in vivo* systems. In the lungs, BQ-123 acts as an antagonist to ET-1, which is one of the three isoforms of endothelin, a peptide secreted by endothelial cells.² BQ-123 reduces the proliferative effect of ET-1 in cultured human pulmonary arterial smooth muscle cells.³

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store BQ-123 at $-20\text{ }^{\circ}\text{C}$ and it is stable for 2 years.

Preparation Instructions

The solubility of this product is tested in water at 0.25 mg/mL. One literature reference cites preparation of stock solutions of BQ-123 in PBS with 20% DMSO, at 10 mg/mL.⁴ Another literature reference notes that 10 mM stock solutions of BQ-123 in deionized water may be stored at $-20\text{ }^{\circ}\text{C}$.⁵

References

1. Ishikawa, K. *et al.*, Cyclic pentapeptide endothelin antagonists with high ETA selectivity. Potency- and solubility-enhancing modifications. *J. Med. Chem.*, **35(11)**, 2139-2142 (1992).
2. Hickey, K.A. *et al.*, Characterization of a coronary vasoconstrictor produced by cultured endothelial cells. *Am. J. Physiol.*, **248(5 Pt 1)**, C550-C556 (1985).
3. Zamora, M.A. *et al.*, BQ123, an ETA 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. Berthiaume, N. *et al.*, Heterozygous Knock-Out of ET_B Receptors Induces BQ-123-Sensitive Hypertension in the Mouse. *Hypertension*, **36(6)**, 1002-1007 (2000).
5. Pisarcik, S. *et al.*, Activation of hypoxia-inducible factor-1 in pulmonary arterial smooth muscle cells by endothelin-1. *Am. J. Physiol. Lung Cell Mol. Physiol.*, **304(8)**, L549-L561 (2013).

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