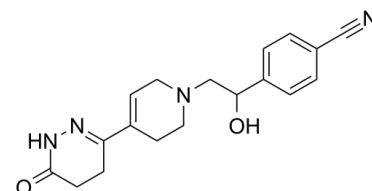


Data Sheet

Product Name:	SCH00013
Cat. No.:	CS-5926
CAS No.:	217963-18-3
Molecular Formula:	C ₁₈ H ₂₀ N ₄ O ₂
Molecular Weight:	324.38
Target:	Others
Pathway:	Others
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

SCH00013 is a cardiotonic agent that primarily acts via an increase in myofibrillar Ca⁺⁺ sensitivity, have a significant Ca(2+)sensitizing effect at pH 7.2 to 7.4. In vitro: SCH00013 at 10⁻⁴ M increased the systolic cell shortening by 52% above the base-line value in association with an insignificant increase in the systolic fluorescence ratio by 15% above the control. [1] In vivo: The positive inotropic effects of 10⁻⁴ M SCH00013 on the dog and rabbit were 38% and 29% of the maximal response to isoproterenol. [1] SCH00013 elicited a positive inotropic effect at more than 0.3 and 1 mg/kg, i.v. in normal and heart failure dogs. [2] SCH00013 elicits a positive inotropic effect mainly through an increase in myofilament Ca²⁺ sensitivity without increasing the heart rate. [3]

References:

- [1]. Sugawara H et al. A novel cardiotonic agent SCH00013 acts as a Ca⁺⁺ sensitizer with no chronotropic activity in mammalian cardiac muscle. J Pharmacol Exp Ther. 1998 Oct;287(1):214-22.
- [2]. Tadano N et al. SCH00013, a novel Ca(2+) sensitizer with positive inotropic and no chronotropic action in heart failure. J Pharmacol Sci. 2005 Jan;97(1):53-60.
- [3]. Endoh M et al. Pharmacology of SCH00013: a novel Ca²⁺ sensitizer. Cardiovasc Drug Rev. 2001 Winter;19(4):345-66.

CAIndexNames:

Benzonitrile, 4-[2-[3,6-dihydro-4-(1,4,5,6-tetrahydro-6-oxo-3-pyridazinyl)-1(2H)-pyridinyl]-1-hydroxyethyl]-

SMILES:

N#CC1=CC=C(C(O)CN2CC=C(C(CC3=NNC3=O)CC2)C=C1

Caution: Product has not been fully validated for medical applications. For research use only.

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