



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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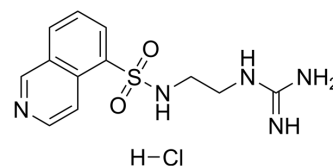
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## HA-1004 hydrochloride

Cat. No.:	HY-112348
CAS No.:	92564-34-6
Molecular Formula:	C <sub>12</sub> H <sub>16</sub> ClN <sub>5</sub> O <sub>2</sub> S
Molecular Weight:	329.81
Target:	Cyclic GMP-AMP Synthase; PKA; ERK; Calcium Channel
Pathway:	Immunology/Inflammation; Stem Cell/Wnt; TGF-beta/Smad; MAPK/ERK Pathway; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

#### Description

HA-1004 hydrochloride is a selective inhibitor of PKA, which can inhibit lipolysis and induce vascular relaxation. HA-1004 hydrochloride is also a dual inhibitor of cyclic GMP-dependent protein kinase and cyclic AMP-dependent protein (Cyclic GMP-AMP Synthase), and is involved in smooth muscle, second messenger, cyclic AMP and cyclic GMP regulation mechanisms. HA-1004 hydrochloride an antagonist for calcium, that can be used as a vasodilator to inhibit the contraction of rabbit aortic strips, or to antagonize ERK and tyrosine hydroxylase (TH) phosphorylation in morphine abstinence rat models<sup>[1][2][3][4]</sup>.

### REFERENCES

- [1]. Almela P, et al. Crosstalk between G protein-coupled receptors (GPCRs) and tyrosine kinase receptor (TXR) in the heart after morphine withdrawal. *Front Pharmacol.* 2013 Dec 27;4:164.
- [2]. Goodman HM, et al. The isoquinoline sulfonamide inhibitors of protein phosphorylation, H-7, H-8, and HA-1004, also inhibit RNA synthesis: studies on responses of adipose tissue to growth hormone. *Endocrinology.* 1990 Jan;126(1):441-50.
- [3]. Ishikawa T, et al. Relaxation of vascular smooth muscle by HA-1004, an inhibitor of cyclic nucleotide-dependent protein kinase. *J Pharmacol Exp Ther.* 1985 Nov;235(2):495-9.
- [4]. Ishikawa T, et al., Relaxation of vascular smooth muscle by HA-1004, an inhibitor of cyclic nucleotide-dependent protein kinase. *J Pharmacol Exp Ther.* 1985 Nov;235(2):495-9.

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

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