

H-89

cAMP-Dependent Protein Kinase Inhibitor

Catalog # tlr1-h89

For research use only

Version # 08E09-MM

PRODUCT INFORMATION

Content:

- 5 mg H-89

Storage and stability:

- H-89 is provided as a solid and shipped at room temperature. Store at -20°C. Solid product is stable 1 year at -20°C.
- Upon resuspension, H-89 should be aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles. Resuspended product is stable 3 months at -20°C when properly stored.

CHEMICAL PROPERTIES

CAS number: 127243-85-0

Synonym: 5-isoquinolinesulfonamide, 2HCl

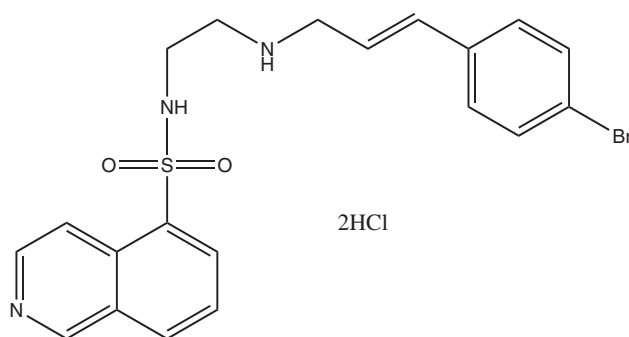
Formula: C₂₀H₂₀BrN₃O₂S 2HCl

Molecular weight: 519.3

Solubility: 50mg/ml in DMSO and ethanol, 25 mg/ml in H₂O (heat to dissolve)

Appearance: Off-white solid

Purity: >99% (HPLC)



DESCRIPTION

H-89 is a selective, potent cell permeable inhibitor of cAMP-dependent protein kinase (PKA). PKA is involved in the TLR-mediated TREM-1 expression on macrophages following LPS stimulation^{1,2}. PKA inhibition with H-89 can also reduce IL-6 expression by 50%³.

1. **Hu J et al. 2002.** Regulation of IL-1 Receptor-Associated Kinases by Lipopolysaccharide1. *J. Immunol.* 168: 3910-3914. 2. **Murakami Y. et al., 2007.** Lipopolysaccharide-Induced Up-Regulation of Triggering Receptor Expressed on Myeloid Cells-1 Expression on Macrophages Is Regulated by Endogenous Prostaglandin E2. *J. Immunol.* 178: 44. 3. **Weigert C. et al., 2003.** Microarray expression analysis of mesangial cells overexpressing glucose transporters: marked increase in interleukin-6 production. *Nephrol. Dial. Transplant.* 18: 32-44.

METHODS

Working concentration: 10-50 μM

PKA inhibition:

To assess the role of PKA, pretreat cells, such as macrophages or HEK293 cells transfected with one or several TLR genes, for 1 h with or without H-89 at 10-50 μM and then incubate at 37°C with the appropriate TLR ligand, such as LPS, for 20 min to 1 hour. Immediately following LPS stimulation, the cell lysates can be used for immunoblotting with anti-TREM-1 antibody. Alternatively, the cell lysates can be used for mRNA quantitation using RT-QPCR and the appropriate primers³. The concentration of cytokines in the supernatant, such as IL-1 and IL-6 can be measured by an enzyme-linked immunosorbent assay (ELISA)².

RELATED PRODUCTS

Product	Catalog Code
pUNO-hTLR7	puno-htlr7
pUNO-mTLR7	puno-mtlr7
Gardiquimod	tlrl-gdq
pUNO-hTLR9	puno-htlr9a
pUNO-mTLR9	puno-mtlr9
ODN 2006	tlrl-hodnb

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