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产品名称：K-7174 (dihydrochloride)
产品别名：K-7174 dihydrochloride

生物活性：

Description

K-7174 dihydrochloride is a novel cell adhesion inhibitor; inhibits the expression of vascular cell adhesion molecule-1 (VCAM-1) induced by either IL-1β or TNF-α. IC50 value: Target: GATA-specific inhibitor in vitro: K-7174 inhibited the expression of vascular cell adhesion molecule-1 (VCAM-1) induced by either tumor necrosis factor alpha or interleukin-1beta, without affecting the induction of intercellular adhesion molecule-1 or E-selectin. K-7174 had no effect on the stability of VCAM-1 mRNA.K-7174 did not influence the binding to any of the following binding motifs: octamer binding protein, AP-1, SP-1, ets, NFkappaB, or interferon regulatory factor [1]. Addition of 10 microM K-7174 rescued these inhibitions of Epo protein production and promoter activity induced by IL-1beta, TNF-alpha, or L-NMMA, respectively [2]. K-7174 had the potential to induce endoplasmic reticulum (ER) stress evidenced by induction of GRP78 and CHOP.Other inducers of ER stress completely reproduced the effects of K-7174 including suppression of lipid accumulation, blockade of induction of adiponection and PPARgamma and maintenance of MCP-1 expression [3]. in vivo: K-7174, one of proteasome inhibitory homopiperazine derivatives, exhibits a therapeutic effect, which is stronger when administered orally than intravenously, without obvious side effects in a murine myeloma model. Moreover, K-7174 kills bortezomib-resistant myeloma cells carrying a β5-subunit mutation in vivo and primary cells from a patient resistant to bortezomib [4].

Solvent&Solubility

In Vitro:

H_2O : 15 mg/mL (23.38 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5584 mL	7.7922 mL	15.5843 mL
	5 mM	0.3117 mL	1.5584 mL	3.1169 mL
	10 mM	0.1558 mL	0.7792 mL	1.5584 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

References

[1]. Umetani M, et al. A novel cell adhesion inhibitor, K-7174, reduces the endothelial VCAM-1 induction by inflammatory cytokines, acting through the regulation of GATA. Biochem Biophys Res Commun. 2000 Jun 7;272(2):370-4.

[2]. Imagawa S, et al. A GATA-specific inhibitor (K-7174) rescues anemia induced by IL-1beta, TNF-alpha, or L-NMMA. FASEB J. 2003 Sep;17(12):1742-4.

[3]. Shimada T, et al. Unexpected blockade of adipocyte differentiation by K-7174: implication for endoplasmic reticulum stress. Biochem Biophys Res Commun. 2007 Nov 16;363(2):355-60.

[4]. Kikuchi J, et al. The novel orally active proteasome inhibitor K-7174 exerts anti-myeloma activity in vitro and in vivo by down-regulating the expression of class I histone deacetylases. J Biol Chem. 2013 Aug 30;288(35):25593-602.