K-7174

Cat. No.: HY-12743
CAS No.: 191089-59-5
Molecular Formula: C₃₃H₄₈N₂O₆
Molecular Weight: 568.74
Target: Others
Pathway: Others
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description

K-7174 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, NFκB, 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 adiponectin 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].

CUSTOMER VALIDATION

- FASEB J. 2020 Jan 27.
- Department of Molecular Medicine and Biopharmaceutical Sciences. 2020 May.

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REFERENCES

