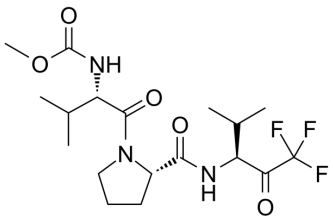
ZD8321

Cat. No.:	HY-U00256
CAS No.:	182073-77-4
Molecular Formula:	$C_{18}H_{28}F_3N_3O_5$
Molecular Weight:	423.43
Target:	Elastase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	ZD8321 is a potent inhibitor of human Neutrophil elastase (NE) with a K_i of 13±1.7 nM.
IC_{50} & Target	Ki: 13±1.7 nM (Neutrophil elastase)[1]
In Vitro	TNFα-activated HUVEC is dose dependently inhibited by ZD8321.The adhesion between cancer cells with high elastase activity and TNFα-activated HUVEC is also inhibited by ZD8321. Expression of cell surface E-selectin by NE stimulation is suppressed in the presence of ZD8321. The concentration of soluble E-selectin in the medium increases after adhesive reaction between neutrophils and HUVEC. This increase is also dose dependently inhibited by ZD8321[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [2]	HUVECs are cultured in RPMI 1640 containing 5% FBS for 6 h in collagen-coated, 24-well plates before the experiment. Some of the confluent HUVECs are further incubated with TNFα (1 ng/mL) and ZD8321 (0-50 mM), or with human NE (0-100ng/mL) for 4 h at 37°C. For adhesion assays, cancer cells resuspended in RPMI 1640 containing 5% FBS are added to each HUVEC-layered well. The plates are shaken at 700 rpm for 10 min at room temperature, washed twice with PBS, and examined by phase-contrast microscopy to determine the number of cells bound onto the HUVEC monolayer. The adhesive reactions of neutrophils to HUVEC are also analyzed in this manner[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Veale CA, et al. Orally active trifluoromethyl ketone inhibitors of human leukocyte elastase. J Med Chem. 1997 Sep 26;40(20):3173-81.

[2]. Nozawa F, et al. Elastase activity enhances the adhesion of neutrophil and cancer cells to vascular endothelial cells. J Surg Res. 2000 Dec;94(2):153-8.

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

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