hCAI/II-IN-8

Cat. No.: HY-161507

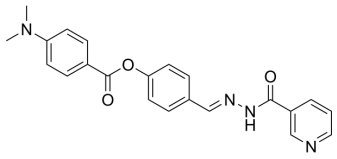
Molecular Formula: $C_{22}H_{20}N_4O_3$

Molecular Weight: 388.42

Target: Carbonic Anhydrase; Cholinesterase (ChE)

Pathway: Metabolic Enzyme/Protease; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	hCAI/II-IN-8 (Compound 8) is a hydrazide derivative based on 4-hydroxybenzaldehyde. hCAI/II-IN-8 primarily targets human carbonic anhydrase isomerase I (hCA I) and II (hCA II) for inhibition (IC_{50} = 21.35 ± 0.39 nM (hCA I); 7.12 ± 0.12 nM (hCA II)). hCAI/II-IN-8 inhibits AChE and BChE as well(IC_{50} = 46.27 ±0.75 nM (AChE); 43.38 ± 0.83 nM (BChE)). [1].[1].			
IC_{50} & Target	hCA I 21.35 nM (IC_{50})	hCA II 7.12 nM (IC_{50})	AChE 46.27 ±0.7 nM (IC_{50})	BChE 43.38 ± 0. nM (IC_{50})
In Vitro	hCAI/II-IN-8 is an efficient activity inhibitor by forming multiple hydrogen bonds and hydrophobic interactions with key residues in hCA I and hCA II. hCAI/II-IN-8 also has high stability in binding to the enzyme[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

REFERENCES

[1]. Çakmak, R.et al. Synthesis of Novel Hydrazide–Hydrazone Compounds and In Vitro and In Silico Investigation of Their Biological Activities against AChE, BChE, and hCA I and II. ACS Omega, 9(18), 20030–20041.

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