MLN-4760

Cat. No.: HY-19414
CAS No.: 305335-31-3
Molecular Formula: C₁₉H₂₃Cl₂N₃O₄
Molecular Weight: 428.31
Target: Angiotensin-converting Enzyme (ACE)
Pathway: Metabolic Enzyme/Protease
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description
MLN-4760 is a potent and selective human ACE2 inhibitor (IC₅₀, 0.44 nM), with excellent selectivity (>5000-fold) versus related enzymes including human testicular ACE (IC₅₀, >100 μM) and bovine carboxypeptidase A (CPDA; IC₅₀, 27 μM).

IC₅₀ & Target
IC₅₀: 0.44 nM (Human ACE2), 27 μM (Bovine carboxypeptidase A)[1]

In Vitro
MLN-4760 is a potent and selective human ACE2 inhibitor (IC₅₀, 0.44 nM), with excellent selectivity (>5000-fold) versus related enzymes human testicular ACE (IC₅₀, >100 μM) and bovine carboxypeptidase A (CPDA; IC₅₀, 27 μM)[1]. MLN-4760 effectively quenches cleavage of the 7-Mca-YVADAPK(Dnp) in rhACE2. MLN-4760 shows pIC₅₀ at rhACE2 of 8.5±0.1 and at rhACE of 4.4±0.2. MLN-4760 also shows pIC₅₀ at rhACE2 of 4.7±0.1, 6.9±0.1 and at ACE of 4.4±0.1, 6.2±0.1 in murine heart and mononuclear cells (MNCs), respectively[2].

In Vivo
MLN-4760 (100 μM, intracerebroventricular infusion for five days) significantly worsens neurological function at 4 h and 3 d post-stroke without significantly increasing infarct volume[3].

PROTOCOL

Animal Administration [3]
Rats[3]
In a related experiment to evaluate the role of central ACE2 in stroke, randomly assigned rats (n = 16) are treated centrally for five days prior to and three days after stroke with the ACE2 inhibitor MLN-4760 (100 μM infused at a rate of 0.5 μL/h) or sterile saline (0.9%) via intracerebroventricular infusion. Following endothelin-1 MCAO, neurological function is assessed at 4 h, 1 d, and 3 d, and brains are harvested at 3 d post-stroke for infarct volume analysis as above[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES