Efonidipine

Cat. No.: HY-12502
CAS No.: 111011-63-3
Molecular Formula: C₃₄H₃₈N₃O₇P
Molecular Weight: 631.66
Target: Calcium Channel
Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description
Efondipine (NZ-105) is a dual T-type and L-type calcium channel blocker (CCB). IC50 value: Target: calcium channel blocker in vitro: Efondipine and nifedipine, but not other examined CCBs, also increased the N(6), 2′,5′-dibutyryladenosine 3′,5′-cyclic monophosphate (dbcAMP)-induced StAR mRNA, which reflects the action of adrenocorticotropic hormone, and efondipine and R(-)-efondipine enhanced the dbcAMP-induced DHEA-S production in NCI-H295R adrenocortical carcinoma cells [1]. I(Ca(T)) was blocked mainly by a tonic manner by nifedipine, by a use-dependent manner by mibefradil, and by a combination of both manners by efondipine. IC50s of these Ca2+ channel antagonists to I(Ca(T)) and L-type Ca2+ channel current (I(Ca(L))) were 1.2 micromol/l and 0.14 nmol/l for nifedipine; 0.87 and 1.4 micromol/l for mibefradil, and 0.35 micromol/l and 1.8 nmol/l for efondipine, respectively [4].

in vivo: Twenty hypertensive patients on chronic hemodialysis were given efondipine 20-60 mg twice daily and amlodipine 2.5-7.5 mg once daily for 12 weeks each in a random crossover manner. The average blood pressure was comparable between the efondipine and amlodipine periods (151 ± 15/77 ± 8 versus 153 ± 15/76 ± 8 mmHg). The pulse rate did not change significantly during the administration periods [2]. In the UM-X7.1 group, EFO treatment significantly attenuated the decrease of LVEF without affecting blood pressure compared with the vehicle group. EFO treatment decreased heart rate (by approximately 10%) in both groups [3].

REFERENCES


