Product Data Sheet

Product Name: Iganidipine
Cat. No.: GC32537

Chemical Properties

Cas. No.	119687-33-1		
SMILES	O=C(C1=C(C)NC(C)=C(C(OC)=O)C1C2=CC=CC([N+]([O-])=O)=C2)OCC(C)(C)CN3CCN(CC=C)CC3		
Formula	$C_{28}H_{38}N_4O_6$	M.Wt	526.62
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Iganidipine		

Protocol

Animal experiment:

Monkeys[1] Five adult cynomolgus monkeys (age, 5-8 years; weight, 3-5 kg; sex, 5 males) are used. All examinations are performed with the monkeys sitting in a modified monkey chair. On the first experimental day, after general anesthesia is induced by Ketamine hydrochloride at a dose of 8 to 10 mg/kg intramuscularly, pupil dilation is induced with one drop of Tropicamide in both eyes. The NBONH, IOP, blood pressure, pulse rate, SaO2, and body temperature are measured at 9AM. Starting on the 2nd experimental day, Iganidipine (0.03% or 0.1%, 30 mL) is administered in one randomly chosen eye and vehicle solution into the other eye twice daily at 8AM and 8PM for 7 days. At 9AM on the 8th experimental day, the same measurements are repeated after general anesthesia and bilateral pupil dilation. After a 4-week interval, a second series of experiments is performed using a different Iganidipine concentration according to the same time schedule.

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References:

[1]. Ishii K, et al. Iganidipine, a new water-soluble Ca2+ antagonist: ocular and periocular penetration after instillation. Invest Ophthalmol Vis Sci. 2003 Mar;44(3):1169-77.

Background

Iganidipine is a Ca2+ antagonist.

Iganidipine (0.03% solution) significantly increases optic nerve head (ONH) tissue blood velocity (NBONH) by 8 to 10% in treated eyes after a single administration ($p<0.05$) or by 18 to 35% after 7-, 14-, or 21-day twicedaily administration in rabbits ($p<0.05$). In monkeys, 0.03% and 0.1% Iganidipine significantly increases NBONH in treated eyes by 20 and 41% after 7-day ($p<0.05$) twice-daily administration, respectively[1].

[1]. Ishii K, et al. Iganidipine, a new water-soluble Ca2+ antagonist: ocular and periocular penetration after instillation. Invest Ophthalmol Vis Sci. 2003 Mar;44(3):1169-77.

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