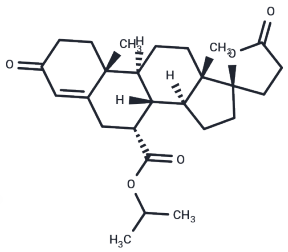
Data Sheet (Cat.No.T13881)

TargetMol

Dicirenone

Chemical Properties



CAS No. : 41020-79-5

Formula: C26H36O5

Molecular Weight: 428.56

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Dicirenone (SC26304) inhibits the Mineralocorticoid receptor (MR), aldosterone regulation of the urinary K+:Na+ ratio, and aldosterone binding to renal cytoplasmic and nuclear receptors.
Targets(IC50)	ATPase,Glucocorticoid Receptor
In vivo	In glycerol density gradients, cytoplasmic [3H]Aldosterone receptor complexes sediment at 8.5 S and 4 S in low concentrations of salt and at 4.5 S in high concentrations of salt. Similarly, cytoplasmic [3H]Dicirenone receptor complexes sediment at 3 S in low concentrations of salt and 4 S in high concentrations of salt. The cytoplasmic binding of [3H]Aldosterone and [3H]Dicirenone is similar in magnitude and involves the same set of sites. Under three sets of conditions - (i) in the intact rat, (ii) in kidney slices, and (iii) in reconstitution studies (mixing prelabeled cytoplasm with either purified renal nuclei or chromatin) - [3H]Dicirenone does not yield specific nuclear complexes, in contrast to the reproducible generation of these complexes with [3H]Aldosterone. Administration of Dicirenone (SC-26304) alone in doses of 3-600 μg/100 g of body weight has no effect on urinary Na+:creatinine or K+:creatinine ratios, expressed as urinary K+:Na+ ratios. Aldosterone (0.3 μg/100 g of body weight) increases the K+:Na+ ratio 5-fold. This increase is significantly inhibited by 180 μg/100 g of body weight of Dicirenone and completely inhibited by 600 μg/100 g of body weight. To correlate inhibitory action and receptor occupancy, the same doses of Dicirenone are given to rats injected with 0.036 μg of [3H]Aldosterone. A dose of 180 μg/100 g of body weight reduces specific binding of Aldosterone in cytoplasmic and nuclear fractions to less than half of the control levels, and 600 μg/100 g of body weight eliminates specific binding. The dose of Aldosterone used in the physiological studies is about eight times that used in the binding studies, but both doses are well below saturating amounts[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3334 mL	11.667 mL	23.334 mL
5 mM	0.4667 mL	2.3334 mL	4.6668 mL
10 mM	0.2333 mL	1.1667 mL	2.3334 mL
50 mM	0.0467 mL	0.2333 mL	0.4667 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Marver D, et al. Renal aldosterone receptors: studies with (3H)aldosterone and the anti-mineralocorticoid (3H) spirolactone (SC-26304). Proc Natl Acad Sci U S A. 1974 Apr;71(4):1431-5.