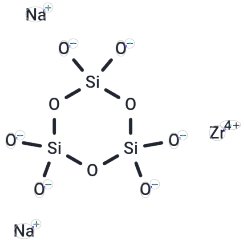
Data Sheet (Cat.No.T78513)

TargetMol

Sodium zirconium cyclosilicate

Chemical Properties



CAS No. : 17141-74-1

Formula: Na2O9Si3Zr

Molecular Weight: 365.46

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	Sodium zirconium cyclosilicate (UXSi-9) is a novel selective cation exchanger and a K+ binder that can be used to remove excess K+ from the body and can be used in the treatment of hyperkalemia.
Targets(IC50)	Others
In vitro	Sodium zirconium cyclosilicate (ZS-9) is a crystalline, inorganic cation exchanger highly selective for trapping excess monovalent cations, particularly K+ and ammonium ions. Its exchange capacity for divalent ions (e.g., Ca2+ and Mg2+) is less than 0.05 mEq/g, exhibiting over 25-fold greater selectivity for K+ than for Ca2+ or Mg2+ [1].
In vivo	Sodium zirconium cyclosilicate (ZS-9; 2-6 g/kg; p.o.; daily for 5 days) effectively absorbs and eliminates potassium ions in Sprague-Dawley rats, with subsequent recovery in feces [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7363 mL	13.6814 mL	27.3628 mL
5 mM	0.5473 mL	2.7363 mL	5.4726 mL
10 mM	0.2736 mL	1.3681 mL	2.7363 mL
50 mM	0.0547 mL	0.2736 mL	0.5473 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

Stavros F, et al. Characterization of structure and function of ZS-9, a K+ selective ion trap. PLoS One. 2014 Dec 22;9 (12):e114686.

Ash SR, et al. A phase 2 study on the treatment of hyperkalemia in patients with chronic kidney disease suggests that the selective potassium trap, ZS-9, is safe and efficient. Kidney Int. 2015 Aug;88(2):404-11.