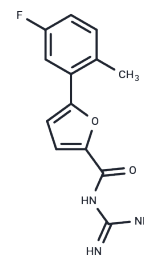


KR-32568

## Chemical Properties

CAS No. : 852146-73-7  
 Formula: C<sub>13</sub>H<sub>12</sub>FN<sub>3</sub>O<sub>2</sub>  
 Molecular Weight: 261.25  
 Storage: 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	KR-32568 is a sodium/hydrogen exchanger 1 (NHE-1) inhibitor (IC <sub>50</sub> : 230 nM) with potent cardioprotective effects. At a concentration of 10 μM, it restored cardiac systolic function in an isolated ischemic rat heart model. Additionally, KR-32568 (0.3 mg/kg) reduced myocardial infarction size in a rat model of ischemia and reperfusion injury.
Targets(IC <sub>50</sub> )	Sodium Channel
In vitro	KR-32568 (10 nM-1 μM) inhibited NHE-1-mediated platelet swelling induced by intracellular acidification in rabbit platelet-rich plasma in a concentration-dependent manner, with an IC <sub>50</sub> value of 24 nM.[1]
In vivo	KR-32568 (0.1-1.0 mg/kg; i.v.; once) exerts effective cardioprotective effects in rats, such as reducing infarct size and significantly reducing the total number of premature ventricular contractions.[1]

## Solubility Information

Solubility	DMSO: 90 mg/mL (344.5 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (12.63 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8278 mL	19.1388 mL	38.2775 mL
5 mM	0.7656 mL	3.8278 mL	7.6555 mL
10 mM	0.3828 mL	1.9139 mL	3.8278 mL
50 mM	0.0766 mL	0.3828 mL	0.7656 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

- Roh HY, et al. Cardioprotective effects of [5-(2-methyl-5-fluorophenyl)furan-2-ylcarbonyl]guanidine (KR-32568) in an anesthetized rat model of ischemia and reperfusion heart injury. *Pharmacology*. 2005;75(1):37-44.
- Lee S, et al. (5-Arylfuran-2-ylcarbonyl)guanidines as cardioprotectives through the inhibition of Na<sup>+</sup>/H<sup>+</sup> exchanger isoform-1. *J Med Chem*. 2005;48(8):2882-2891.
- Tang Q, et al. Persistent sodium current and Na<sup>+</sup>/H<sup>+</sup> exchange contributes to the augmentation of the reverse Na<sup>+</sup>/Ca<sup>2+</sup> exchange during hypoxia or acute ischemia in ventricular myocytes. *Pflugers Arch*. 2012;463(4):513-522.
- Hu LF, et al. Hydrogen sulfide regulates Na<sup>+</sup>/H<sup>+</sup> exchanger activity via stimulation of phosphoinositide 3-kinase/Akt and protein kinase G pathways. *J Pharmacol Exp Ther*. 2011;339(2):726-735.

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