

Metolazone

Cat. No.:	HY-B0209		
CAS No.:	17560-51-9		
Molecular Formula:	C ₁₆ H ₁₆ ClN ₃ O ₃ S		
Molecular Weight:	365.83		
Target:	Thrombin		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (273.35 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		2.7335 mL	13.6676 mL	27.3351 mL
	5 mM		0.5467 mL	2.7335 mL	5.4670 mL
	10 mM		0.2734 mL	1.3668 mL	2.7335 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.75 mg/mL (7.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.75 mg/mL (7.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.75 mg/mL (7.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Metolazone (SR-720-22) is primarily used to treat congestive heart failure and high blood pressure.

In Vitro

Metolazone (SR-720-22) is a thiazide-like diuretic marketed under the brand names Zytanix from Zydus Cadila, Zaroxolyn, and Mykrox. It is primarily used to treat congestive heart failure and high blood pressure. Metolazone indirectly decreases the amount of water reabsorbed into the bloodstream by the kidney, so that blood volume decreases and urine volume increases. This lowers blood pressure and prevents excess fluid accumulation in heart failure. Metolazone is sometimes used

together with loop diuretics such as furosemide or bumetanide, but these highly effective combinations can lead to dehydration and electrolyte abnormalities. Metolazone and the other thiazide diuretics inhibit the function of the sodium-chloride symporter, preventing sodium and chloride, and therefore water too, from leaving the lumen to enter the tubule cell. As a result, water remains in the lumen and is excreted as urine, instead of being reabsorbed into the bloodstream. Since most of the sodium in the lumen has already been reabsorbed by the time the filtrate reaches the distal convoluted tubule, thiazide diuretics have limited effects on water balance and on electrolyte levels. Nevertheless, they can be associated with low sodium levels, volume depletion, and low blood pressure, among other adverse effects. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- bioRxiv. 2024 Feb 16.

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REFERENCES

- [1]. Stern A. Metolazone, a diuretic agent. Am Heart J. 1976 Feb;91(2):262-3.
- [2]. Thompson DM. A new antihypertensive: metolazone treatment of hypertension. J Kans Med Soc. 1977 Jul;78(7):337-9, 342.

Caution: Product has not been fully validated for medical applications. For research use only.

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