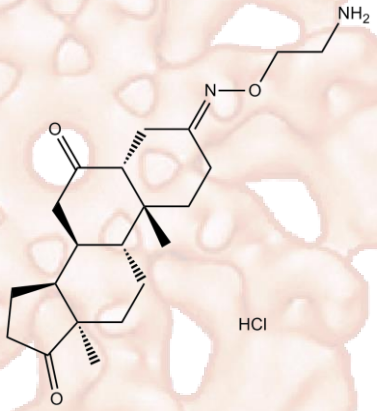
Product Data Sheet

Istaroxime hydrochloride



Cat. No.: A3508

CAS No.: 374559-48-5

Formula: C21H33ClN2O3

M.Wt: 396.95

Synonyms: PST-2744 (hydrochloride);PST 2744 (hydrochloride);PST2744 (hydrochloride)

Target: Membrane Transporter/Ion Channel

Pathway: ATPase

Storage: Store at -20°C

Solvent & Solubility

In Vitro

Soluble in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	2.5192 mL	12.5960 mL	25.1921 mL
5 mM	0.5038 mL	2.5192 mL	5.0384 mL
10 mM	0.2519 mL	1.2596 mL	2.5192 mL

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

Biological Activity

Shortsummary	Inhibitor of Na+/K+ ATPase
IC_{50} & Target	0.43 μM (Na+/K+ ATPase)

In Vitro

Cell Viability Assay

Cell Line:	Guinea pig ventricular myocytes
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions:	4 μM, 0.5 s

	Applications:	Resting Ca2+ was similarly increased by istaroxime (from 61.3 to 92.4 nM). Istaroxime increased [Ca]SR-tot by 47%. Istaroxime increased the amount of Ca2+ extruded by the Na+/Ca2+ exchanger (CaNCX) during caffeine-induced transients (+130). Istaroxime shortened the time elapsing between the start of the caffeine pulse and SR Ca2+ release.
In Vivo	**Animal experiment**	
	Animal models:	Bio TO.2 hamsters and Bio F1B hamsters
	Dosage form:	Oral administration, 30 mg/5 mL/kg/day
	Applications:	Heart function of istaroxime-treated hamsters was comparable to that of healthy animals, and had a significantly higher LVSP and both positive and negative dP/dT when compared with that of vehicle-treated animals. Coronary flow rate in hearts isolated from istaroxime-treated hamsters was higher than that from vehicle-treated Bio TO.2 animals. Besides that, Bio TO.2 hamsters treated with istaroxime had both time and frequency domain indexes of HRV, i.e. standard deviation of R-R intervals, TP, LF and HF, augmented with respect to vehicle-treated animals. Moreover , the LF/HF ratio of istaroxime-treated animals was similar to that observed in Bio F1B hamsters.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1] Rocchetti M, Besana A, Mostacciuolo G, et al. Modulation of sarcoplasmic reticulum function by Na+/K+ pump inhibitors with different toxicity: digoxin and PST2744 [(E, Z)-3-((2-aminoethoxy) imino) androstane-6, 17-dione hydrochloride]. Journal of Pharmacology and Experimental Therapeutics, 2005, 313(1): 207-215.

[2] Giudice P L, Mattera G G, Gagnol J P, et al. Chronic istaroxime improves cardiac function and heart rate variability in cardiomyopathic hamsters. Cardiovascular drugs and therapy, 2011, 25(2): 133-138.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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