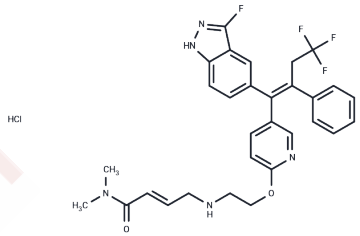
Data Sheet (Cat.No.T11530)

TargetMol

H3B-6545 Hydrochloride

Chemical Properties



CAS No. :	2052132-51-9
Formula:	C30H30ClF4N5O2
Molecular Weight:	604.04
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	H3B-6545 Hydrochloride is a selective, oral estrogen receptor covalent antagonist (SERCA).
Targets(IC50)	Estrogen Receptor/ERR,Others
In vitro	H3B-6545 is a highly selective small molecule that inhibits both wild-type (ERαWT) and mutant estrogen receptors (ERα), demonstrating potent activity against ERαWT-positive breast cancer cell lines (MCF7, HCC1428, BT483, T47D, and CAMA-1) with GI50s of 0.2-5.2 nM. It shows superior efficacy in biochemical and cell-based assays compared to standard treatments and other experimental agents, under continuous and washout conditions. H3B-6545 uniquely targets C530, enforcing a specific antagonist conformation, and is classified as a selective ER covalent antagonist (SERCA), representing a first-in-class therapeutic approach.
In vivo	Administered orally once daily, H3B-6545 demonstrates potent and superior anti-tumor efficacy compared to fulvestrant in the MCF-7 xenograft model, achieving maximal effectiveness at doses notably lower than the maximum tolerated dose in mice. Furthermore, H3B-6545 exhibits enhanced anti-tumor effects over Tamoxifen and Fulvestrant in patient-derived xenograft models of estrogen receptor-positive breast cancer, including those with ERα mutations, across various species including rats and monkeys. Notably, H3B-6545 is well-tolerated across a wide dosage range, maintaining significant efficacy at exposures well above those necessary in mouse xenograft models.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6555 mL	8.2776 mL	16.5552 mL
5 mM	0.3311 mL	1.6555 mL	3.311 mL
10 mM	0.1656 mL	0.8278 mL	1.6555 mL
50 mM	0.0331 mL	0.1656 mL	0.3311 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

Peter G. Smith, et al. Abstract DDT01-04: Discovery and development of H3B-6545: A novel, oral, selective estrogen receptor covalent antagonist (SERCA) for the treatment of breast cancer.AACR Annual Meeting 2017; April 1-5.

Manav Korpal, et al. Development of a First-in-Class Oral Selective ER Covalent Antagonist (SERCA) for the Treatment of ERα