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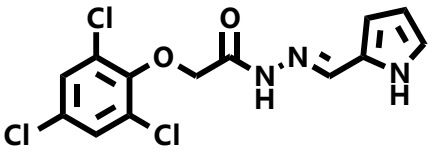
Breast Cancer Stem Cell Inhibitor– ML239

Chemical Name: (E)-N'-((1H-pyrrol-2-yl)methylene)-2-(2,4,6-trichlorophenoxy)acetohydrazide



Molecular Weight:	346.60
Formula:	$C_{13}H_{10}Cl_3N_3O_2$
Purity:	≥98%
CAS#:	1378872-36-6
Solubility:	DMSO up to 100 mM
Storage	Powder: 4ºC 1 year DMSO: 4ºC 3 month -20ºC 1 year

Biological Activity:

ML239 is a potent and selective breast cancer stem cell inhibitor with IC_{50} ~1.16 μM. It displayed greater than 23-fold selective inhibition of the breast CSC-like cell line (HMLE_sh_Ecad) over the isogenic control cell line (HMLE_sh_GFP). It did not significantly inhibit tumorsphere formation in the breast cancer cell line SUM159, which is a mixture of CSCs and differentiated cells. ML239 is also cytotoxic towards MDA-MB-231 breast cancer cells.

How to Use:

In vitro: ML239 was used at 10 μM final concentration in vitro and in cellular assays.

In vivo: n/a

Reference:

1. Carmody LC, et al. Phenotypic high-throughput screening elucidates target pathway in breast cancer stem cell-like cells. (2012) J Biomol Screen. 17(9):1204-10.
2. Germain AR, et al. Identification of a selective small molecule inhibitor of breast cancer stem cells. (2012) Bioorg Med Chem Lett. 22(10):3571-4.
3. http://www.ncbi.nlm.nih.gov/books/NBK133423/