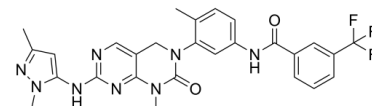


Data Sheet

Product Name:	Pluripotin
Cat. No.:	CS-5597
CAS No.:	839707-37-8
Molecular Formula:	C ₂₇ H ₂₅ F ₃ N ₈ O ₂
Molecular Weight:	550.54
Target:	ERK; Ribosomal S6 Kinase (RSK)
Pathway:	MAPK/ERK Pathway; Stem Cell/Wnt
Solubility:	DMSO : 25 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

Pluripotin is a dual inhibitor of **ERK1** and **RasGAP** with **K_Ds** of 98 nM and 212 nM, respectively. Pluripotin also inhibits **RSK1**, **RSK2**, **RSK3**, and **RSK4** with **IC₅₀s** of 0.5, 2.5, 3.3, and 10.0 μM, respectively. *In Vitro*: Pluripotin (SC-1) inhibits Abl1, p70S6K, PLK2, RSK1, RSK2, RSK3, RSK4 with IC₅₀s of 0.005, 1.4, 2.2, 0.5, 2.5, 3.3, 10.0 μM, respectively. Pluripotin (SC-1) decreases cell growth for 7 colon tumor cell lines. After a five day exposure to 0.1 μM SC-1, the seven colon tumor lines are evaluated for changes in cell number and viability. There is a statistically significant decrease in cell number but >95% viability^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: ^[2]The seven colon cancer lines (**COLO 205**, **HCC-2998**, **HCT-15**, **HCT-116**, **HT29**, **KM12**, **SW-620**) are used. In all experiments, each tumor line is cultured in 60 mm² tissue culture treated dishes at an initial concentration of 62,500/mL (total 4 mL) before addition of **0.1 μM Pluripotin (SC-1)** or an equivalent amount of diluent (DMSO) the next day. Five day exposures are conducted. The final concentration utilized for treatment for all tumor lines is determined by evaluating a range of SC-1 concentrations (0.01 to 10 μM) for sphere formation and any cytotoxic effects in the HCT-116 tumor line. Cell viability is routinely evaluated with the trypan blue exclusion test and is always >95% for concentrations at or below 0.1 μM^[2].

References:

- [1]. Chen S, et al. Self-renewal of embryonic stem cells by a small molecule. *Proc Natl Acad Sci U S A*. 2006 Nov 14;103(46):17266-71.
- [2]. Mertins SD, et al. A small molecule (pluripotin) as a tool for studying cancer stem cell biology: proof of concept. *PLoS One*. 2013;8(2):e57099.

CAIndexNames:

Benzamide, N-[3-[7-[(1,3-dimethyl-1H-pyrazol-5-yl)amino]-1,4-dihydro-1-methyl-2-oxopyrimido[4,5-d]pyrimidin-3(2H)-yl]-4-methylphenyl]-3-(trifluoromethyl)-

SMILES:

CN1C(NC2=NC=C3C(N(C)C(N(C4=CC(NC(C5=CC=CC(C(F)(F)F)=C5)=O)=CC=C4C)C3)=O)=N2)=CC(C)=N1

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

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