

PRODUCT INFORMATION



SC-1

Item No. 10009557

CAS Registry No.: 839707-37-8

Formal Name: N-(3-(7-(1,3-dimethyl-1H-pyrazol-5-ylamino)-1-methyl-2-oxo-1,2-dihydropyrimido[4,5-d]pyrimidin-3(4H)-yl)-4-methylphenyl)-3-(trifluoromethyl)benzamide

Synonym: Pluripotin

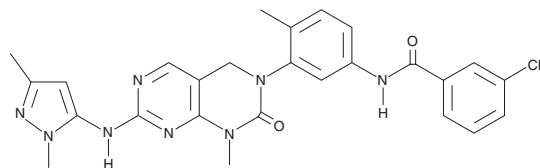
MF: $C_{27}H_{25}F_3N_8O_2$

FW: 550.5

Purity: $\geq 98\%$

Storage: $-20^{\circ}C$

Stability: ≥ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SC-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-1 in an organic solvent purged with an inert gas. SC-1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of SC-1 in these solvents is approximately 25 and 50 mg/ml, respectively.

SC-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SC-1 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The maintenance of embryonic stem cells in culture typically requires feeder cells and various exogenous factors found in serum. Murine embryonic stem (mES) cells can be maintained in the absence of feeder cells and serum but require the leukemia inhibitor factor (LIF) and bone morphogenic protein (BMP) to prevent differentiation and promote self-renewal. SC-1 is a small molecule activator of stem cell renewal that allows the propagation of OG2 mES cells for at least 10 passages in an undifferentiated state.¹ The activity of SC-1 is mediated by the combined inhibition of RasGAP and ERK1 with K_d values of 98 and 212 nM, respectively.¹ Inhibition of RasGAP increases Ras signaling via the PI3-kinase pathway which promotes self-renewal, whereas inhibition of ERK blocks differentiation.

References

1. Chen, S., Do, J.T., Zhang, Q., *et al.* Self-renewal of embryonic stem cells by a small molecule. *Proc. Natl. Acad. Sci. USA* **103**(46), 17266-17271 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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