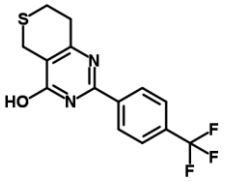
Product Specification Sheet

Product Name	Stemolecule™ XAV939
Description	Stemolecule XAV939 is a cell-permeable small molecule inhibitor of the Wnt / β-catenin pathway. XAV939 inhibits tankyrase 1 and tankyrase 2, thus stabilizing axin and stimulating β-catenin degradation[1]. Current research suggests that Wnt proteins act to maintain stem cells in an undifferentiated, self-renewing state[2]. Wnt proteins act on a variety of stem cells that include neural, mammary and embryonic stem cells. In addition, XAV939 inhibits growth of DLD-1 cells, an APC-deficient colorectal cancer cell line[1].
Catalog Number	04-0046
Size	2 mg
Alternate Name	2-(4-(trifluoromethyl)phenyl)-7,8-dihydro-5H-thiopyrano[4,3-d]pyrimidin-4-ol
Chemical Formula	$C_{14}H_{11}F_3N_2OS$
Structure	
Molecular Weight	312.31
CAS Number	284028-89-3
Purity	Greater than 95% by HPLC analysis
Formulation	White powder
Solubility	XAV939 is soluble in DMSO at 100 mM.
Reconstitution	For a 10 mM concentrated stock solution of XAV939, reconstitute the compound by adding 640.4 µl of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For use in cell culture, warm the medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 µM low-protein binding filter.
Storage and Stability	Store powder at -20°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.
Quality Control	The purity of XAV939 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. No acute cytotoxicity was observed in mouse embryonic stem cells following a 6 hour exposure to 1 nM - 100 µM of XAV939.

References

1. Huang, S.M., Mishina, Y.M., Liu, S., Cheung, A., Stegmeier, F., Michaud, G.A., Charlat, O., Wiellette, E., Zhang, Y., Wiessner, S., Hild, M., Shi, X., Wilson, C.J., Mickanin, C., Myer, V., Fazal, A., Tomlinson, R., Serluca, F., Shao, W., Cheng, H., Schultz, M., Rau, C., Schirle, M., Schlegl, J., Ghidelli, S., Fawell, S., Lu, C., Curtis, D., Kirschner, M.W., Lengauer, C., Finan, P.M., Tallarico, J.A., Bouwmeester, T., Porter, J.A., Bauer, A., and Cong, F. (2009) Tankyrase inhibition stabilizes axin and antagonizes Wnt signaling. Nature 461: 614-620.
2. Nusse, R. (2008) Wnt signaling and stem cell control. Cell Research 18: 523-527.

Stemgent, Inc | 51 Moulton Street, Cambridge, MA 02138 | www.stemgent.com