REPROCELL GROUP COMPANIES
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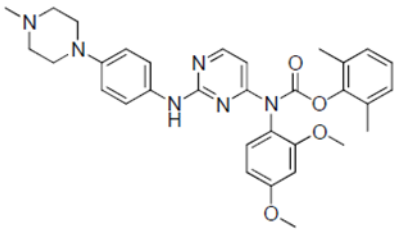
PRODUCT SPECIFICATION SHEET

Product Name	Stemolecule™ WH-4-023
Description	The aminopyrimidinyl carbamate WH-4-023 is a potent Src and LCK inhibitor (IC_{50} < 10 nM)[1]. WH-4-023 has been shown to support the conversion and maintenance of human naïve stem cells[2].
Catalog Number	04-0079
Size	2 mg
Alternate Name	2,6-dimethylphenyl 2,4-dimethoxyphenyl(2-(4-(4-methylpiperazin-1-yl)phenylamino)pyrimidin-4-yl)carbamate
Chemical Formula	$C_{32}H_{36}N_6O_4$
Structure	
Molecular Weight	568.67
CAS Number	837442-57-8
Purity	Greater than 99% purity by HPLC analysis
Appearance	Off-white to brown color solid
Solubility	WH-4-023 is soluble in DMSO at 100 mM and in ethanol at 2.5 mM at room temperature. For a 10 mM concentrated stock solution of WH-4-023, reconstitute the compound by adding 352 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 cell culture, the media should be pre-warmed prior to adding the reconstituted compound. The maximum concentration recommended for dilution in media to ensure complete solubility is 10 µM. Note: for most cells, the maximum tolerance to DMSO is less than 0.5% by volume.
Storage & Stability	Store powder for up to six months at 4 °C, protected from light. Following reconstitution, store aliquots at -20 °C.

Quality Control

The purity of WH-4-023 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of WH-4-023 was tested on mouse embryonic stem cells.

References

1. Martin MW, Newcomb J, Nunes JJ, McGowan DC, Armistead DM, Boucher C, Buchanan JL, Buckner W, Chai L, Elbaum D, Epstein LF, Faust T, Flynn S, Gallant P, Gore A, Gu Y, Hsieh F, Huang X, Lee JH, Metz D, Middleton S, Mohn D, Morgenstern K, Morrison MJ, Novak PM, Oliveira-dos-Santos A, Powers D, Rose P, Schneider S, Sell S, Tudor Y, Turci SM, Welcher AA, White RD, Zack D, Zhao H, Zhu L, Zhu X, Ghiron C, Amouzegh P, Ermann M, Jenkins J, Johnston D, Napier S, Power E. "Novel 2-aminopyrimidine carbamates as potent and orally active inhibitors of Lck: synthesis, SAR, and in vivo anti-inflammatory activity." *J. Med Chem.* 49(16):4981-91 (2006).

2. Theunissen TW, Powell BE, Wang H, Mitalipova M, Faddah DA, Reddy J, Fan ZP, Maetzel D, Ganz K, Shi L, Lungiangwa T, Imsoonthornruksa S, Stelzer Y, Rangarajan S, D'Alessio A, Zhang J, Gao Q, Dawlaty MM, Young RA, Gray NS, Jaenisch R. "Systematic identification of culture conditions for induction and maintenance of naïve human pluripotency." *Cell Stem Cell* 15(4):471-87 (2014).