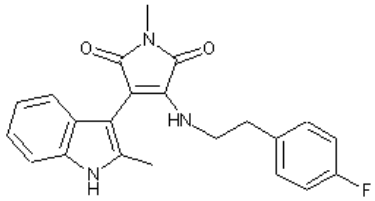
REPROCELL GROUP COMPANIES
bioserve stemgent reinnervate

PRODUCT SPECIFICATION SHEET

Product Name	IM-12
Description	The indolylmaleimide IM-12 is a potent enzymatic (IC_{50}= 52 nM, compared with 92 nM for SB-216763) and intracellular inhibitor of GSK-3β which activates downstream components of canonical Wnt signaling and increasing β-catenin levels. IM-12 promotes increased differentiation of neural progenitor cells to neurons[1]. IM-12 has been shown to support the conversion and maintenance of human naïve stem cells[2].
Catalog Number	04-0081
Size	2 mg
Alternate Name	3-(4-Fluorophenylethylamino)-1-methyl-4-(2-methyl-1H-indol-3-yl)-1H-pyrrole-2,5 dione
Structure	
Chemical Formula	$C_{22}H_{20}FN_3O_2$
Molecular Weight	377.41
CAS Number	1129669-05-1
Purity	99% Purity by HPLC analysis
Appearance	Orange solid
Solubility	IM-12 is soluble in DMSO at 100 mM and in ethanol at 10 mM at room temperature. For a 10 mM concentrated stock solution of IM-12, reconstitute the compound by adding 530 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 and 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 IM-12 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of IM-12 was tested on mouse embryonic stem cells.

References

1. Schmöle AC, Brennführer A, Karapetyan G, Jaster R, Pews-Davtyan A, Hübner R, Ortinau S, Beller M, Rolfs A, Frech MJ. "Novel indolylmaleimide acts as GSK-3β inhibitor in human neural progenitor cells." *Bioorg Med Chem* 18(18): 6785-95 (2010).

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).