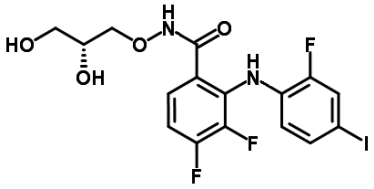
Product Specification Sheet

Product Name	Stemolecule™ PD0325901 in Solution
Description	PD0325901 is a small molecule targeting mitogen-activated protein kinase (MAPK/ERK kinase or MEK) with potential antineoplastic activity. PD0325901, a derivative of MEK inhibitor CI-1040, selectively binds to and inhibits MEK, which may result in the inhibition of the phosphorylation and activation of MAPK/ERK and the inhibition of tumor cell proliferation[1,2]. Along with the ALK5 inhibitor SB431542, PD0325901 has also been shown to increase the efficiency of reprogramming human primary fibroblasts into induced pluripotent stem (iPS) cells[3]. Stemolecule PD0325901 in Solution is a ready to use 10 mM stock solution for stem cell culture.
Catalog Number	04-0006-02
Size	2 mg
Concentration	10 mM in DMSO
Alternate Name	N-[(2R)-2,3-dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
Chemical Formula	$C_{16}H_{14}F_3IN_2O_4$
Structure	
Molecular Weight	482.19
CAS Number	391210-10-9
Purity	Greater than 97% by HPLC analysis
Formulation	10 mM solution of PD0325901 in DMSO (2 mg in 414.8 µl)
Handling	Before opening, briefly centrifuge the vial to ensure full recovery of sample. Aliquotting the stock solution is recommended to avoid repetitive freeze-thaw cycles. For cell culture, the media should be prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Store solution at -20°C protected from light. Stable for 6 months from date of receipt when stored as directed.
Quality Control	The purity of PD0325901 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of PD0325901 was tested on mouse embryonic stem cells.

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References

1. Bain, J., Plater, L., Elliott, M., Hastie, C.J., McLauchlan, H., Klevernic, I., Arthur, J.S., Alessi, D.R., and Cohen, P. (2007) The selectivity of protein kinase inhibitors: a further update. Biochem. J. 408: 297-315.
2. Sebolt-Leopold, J.S., and Herrera, R. (2004) Targeting the mitogen-activated protein kinase cascade to treat cancer. Nat Rev Cancer 4: 937-947.
3. Lin, T., Ambasudhan, R., Yuan, X., Li, W., Hilcove, S., Abujarour, R., Lin, X., Hahm, H.S., Hao, E., Hayek, A., and Ding, S. (2009) A chemical platform for improved induction of human iPSCs. Nat Methods 6: 805-808.