



## Product Specification Sheet

<b>Product Name</b>	Stemolecule™ PD0325901
<b>Description</b>	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 <sup>1,2</sup> . 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 <sup>3</sup> .
<b>Catalog Number</b>	04-0006-10
<b>Size</b>	10 mg
<b>Alternate Name</b>	N-[(2R)-2,3-dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
<b>Chemical Formula</b>	C <sub>16</sub> H <sub>14</sub> F <sub>3</sub> I N <sub>2</sub> O <sub>4</sub>
<b>Structure</b>	
<b>Molecular Weight</b>	482.19
<b>CAS Number</b>	391210-10-9
<b>Purity</b>	Greater than 97% by HPLC analysis
<b>Formulation</b>	Pale purple solid
<b>Solubility</b>	For a 10 mM concentrated stock solution of PD0325901, reconstitute the compound by adding 2.07 ml 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 prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%. This molecule is soluble in DMSO at 100 mM.
<b>Storage and Stability</b>	Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.
<b>Quality Control</b>	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.
<b>References</b>	<ol style="list-style-type: none"><li>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. <i>Biochem J.</i> 408: 297-315.</li><li>2. Sebolt-Leopold, J.S., and Herrera, R. (2004) Targeting the mitogen-activated protein kinase cascade to treat cancer. <i>Nat Rev Cancer</i> 4: 937-947.</li><li>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. <i>Nat Methods</i> 6: 805-808.</li></ol>

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