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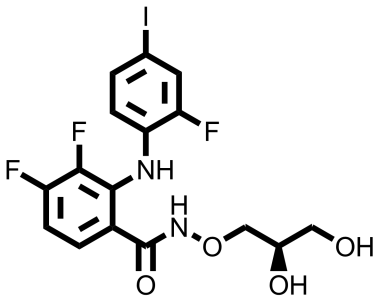
MEK Inhibitor PD0325901

Chemical Name: N-[(2R)-2,3-Dihydroxypropoxy]-3,4-difluoro-2[(2-fluoro-4-iodophenyl)amino]-benzamide



Molecular Weight:	482.19
Formula:	$C_{16}H_{14}F_3IN_2O_4$
Purity:	≥98%
CAS#:	391210-10-9
Solubility:	DMSO up to 100 mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

Biological Activity:

PD0325901 is a highly potent and selective inhibitor of MEK with an IC_{50} of 0.33 nM. Its potency, selectivity, and solubility are all better than many other MEK inhibitors (e.g., CI-1040). It can potently inhibit the phosphorylation and activation of MAPK/ERK and tumor cell proliferation. In combination with CHIR99021, PD0325901 has been shown to promote mouse ES cell self-renewal and iPSC generation.

How to Use:

In vitro: PD0325901 was used at 0.01-0.5 μM in vitro and in cellular assays.

In vivo: PD0325901 was orally administrated to mice at 25 mg/kg once per day.

Reference:

1. Barrett SD, et al. The discovery of the benzhydroxamate MEK inhibitors CI-1040 and PD 0325901. (2008) Bioorg. Med. Chem. Lett. 18: 6501-6504.
2. Lin T, et al. A chemical platform for improved induction of human iPSCs. (2009) Nature Methods 6, 805-808.
3. Henderson YC, et al. MEK inhibitor PD0325901 significantly reduces the growth of papillary thyroid carcinoma cells in vitro and in vivo. (2010) Mol Cancer Ther. 9(7):1968-76.