Mirdametinib (GMP)

Cat. No.: HY-10254G

CAS No.: 391210-10-9

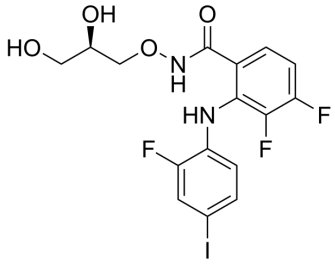
Molecular Formula: $C_{16}H_{14}F_3IN_2O_4$

Molecular Weight: 482.19

Target: MEK

Pathway: MAPK/ERK Pathway

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mirdametinib (PD0325901) (GMP) is Mirdametinib (HY-10254) produced by using GMP guidelines. GMP small molecules works appropriately as an auxiliary reagent for cell therapy manufacture. Mirdametinib is an orally active, selective and non-ATP-competitive MEK inhibitor[1][2][3].
In Vitro	Mirdametinib (250 nM; 7 d) induces differentiation of cardiac PCs into vascular smooth muscle cell (VSMC)-like cells[1]. Mirdametinib (10 μM; 4 d) induces oligodendrocyte precursor cells (OPC) to oligodendrocytes (OL) differentiation[2]. Mirdametinib enhances embryonic stem cells (ESC) self-renewal capacity both by key regulatory genes and ES cell-specific miRNA, which in turn influences ESC self-renewal and cellular differentiation[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nature. 2022 Jan;601(7894):600-605.
- Nat Biomed Eng. 2018 Aug;2(8):578-588.
- Cell Stem Cell. 2022 Jul 7;29(7):1102-1118.e8.
- Sci Transl Med. 2018 Jul 18;10(450):eaaq1093.
- Nat Commun. 2022 Nov 29;13(1):7345.

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REFERENCES

[1]. Avolio E, et al. Cardiac pericyte reprogramming by MEK inhibition promotes arteriologenesis and angiogenesis of the ischemic heart. J Clin Invest. 2022 May 16;132(10):e152308.

[2]. Suo N, et al. Inhibition of MAPK/ERK pathway promotes oligodendrocytes generation and recovery of demyelinating diseases. Glia. 2019 Jul;67(7):1320-1332.

[3]. Ai Z, et al. Maintenance of Self-Renewal and Pluripotency in J1 Mouse Embryonic Stem Cells through Regulating Transcription Factor and MicroRNA Expression Induced by PD0325901. Stem Cells Int. 2016;2016:1792573.

Caution: Product has not been fully validated for medical applications. For research use only.

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