

产品名称：甲羟孕酮  
产品别名：Medroxyprogesterone

| 生物活性：              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |      |           |            |            |
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| Description        | Medroxyprogesterone (MP) is a synthetic pregnane steroid and a derivative of progesterone. It is a potent progesterone receptor agonist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |      |           |            |            |
| In Vitro           | Medroxyprogesterone acetate (MPA, 10 nM) treatment for 48 h induces proliferation of the cells (1.6-fold induction). MPA induces cyclin D1 expression (3.3-fold induction). MPA increases both the protein level (2.2-fold induction) and promoter activity (2.7-fold induction) of cyclin D1 in MCF-7 cells transfected with PRB but not with PRA. Although MPA transcriptionally activates cyclin D1 expression, cyclin D1 promoter does not have progesterone-responsive element-related sequence. MPA induces the transient phosphorylation of Akt (2.7-fold induction at 5 min) and also phosphorylation of inhibitor of NFkappaBalpha (IkappaBalpha) (2.3-fold induction)[1]. MPA activates glucocorticoid receptors, which could mimic part of the anti-atherosclerotic effects of glucocorticoids, and has, on the other hand, also anti-androgenic activity, which might diminish protective oestrogen effects[2]. |                          |      |           |            |            |
| In Vivo            | Long-term treatment with MPA and MPA + E2 increases arterial thrombosis despite inhibitory effects of MPA on atherosclerosis in ApoE-deficient mice. Increased thrombin formation, reduced smooth muscle content and remodelling of non-collagenous plaque matrix may be involved in the pro-thrombotic effects. Thus, MPA exhibits differential effects on arterial thrombosis and on atherosclerosis. In monkeys, MPA interferes with anti-atherosclerotic oestrogen effects whereas progesterone does not[2].                                                                                                                                                                                                                                                                                                                                                                                                            |                          |      |           |            |            |
| Solvent&Solubility | <b>In Vitro:</b><br><b>DMSO :68 mg/mL (197.39 mM)</b><br><b>Ethanol: 14 mg/mL (40.63 mM)</b><br><b>Water: Insoluble</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |      |           |            |            |
|                    | Preparing<br>Stock Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Solvent<br>Concentration | Mass | 1 mg      | 5 mg       | 10 mg      |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 mM                     |      | 2.9028 mL | 14.5142 mL | 29.0284 mL |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5 mM                     |      | 0.5806 mL | 2.9028 mL  | 5.8057 mL  |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10 mM                    |      | 0.2903 mL | 1.4514 mL  | 2.9028 mL  |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 50 mM                    |      | 0.0581 mL | 0.2903 mL  | 0.5806 mL  |
|                    | *请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。<br><br>储备液的保存方式和期限 -80℃, 6 months; -20℃, 1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |      |           |            |            |
| References         | [1] Saitoh M, et al. Endocrinology. 2005, 146(11):4917-25.<br>[2] Freudenberger T, et al. Br J Pharmacol. 2009, 158(8):1951-60.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |      |           |            |            |
| 实验参考：              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          |      |           |            |            |
| Cell Assay         | 细胞实验: [1]<br><br>Cell lines: T47D human breast cancer cells<br><br>Concentrations: 10 nM<br><br>Incubation Time: 4 days<br><br>Method: The cells are plated at a density of 10 or 40 × 10 <sup>4</sup> cells/well in 12-well plates and allowed to attach overnight. The cells are then growth arrested by incubation in phenol red-free DMEM with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |      |           |            |            |

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|                   | 10% charcoal-stripped serum for 24 h followed by treatment with vehicle or MPA by exchanging the culture medium containing these agents with fresh medium every 24 h for 4 d. A Neubauer chamber is used to count cells, and trypan blue experiments are carried out in quadruplicate. |
| <b>References</b> | <p>[1] Saitoh M, et al. Endocrinology. 2005, 146(11):4917-25.</p> <p>[2] Freudenberger T, et al. Br J Pharmacol. 2009, 158(8):1951-60.</p>                                                                                                                                             |



源叶生物