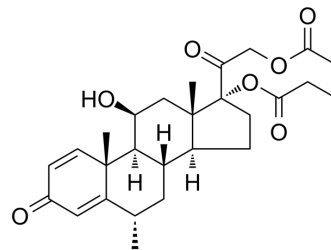


## Methylprednisolone aceponate

|                           |   |
|---------------------------|---|
| <b>Cat. No.:</b>          | HY-103025   |
| <b>CAS No.:</b>           | 86401-95-8  |
| <b>Molecular Formula:</b> | C <sub>27</sub> H <sub>36</sub> O <sub>7</sub>  |
| <b>Molecular Weight:</b>  | 472.57  |
| <b>Target:</b>            | Glucocorticoid Receptor   |
| <b>Pathway:</b>           | Immunology/Inflammation; Vitamin D Related/Nuclear Receptor                               |
| <b>Storage:</b>           | Please store the product under the recommended conditions in the Certificate of Analysis. |



### BIOLOGICAL ACTIVITY

|                    |  |               |   |         |              |                 |   |         |   |
|--------------------|--|---------------|---|---------|--------------|-----------------|---|---------|---|
| <b>Description</b> | Methylprednisolone aceponate (ZK 91588) is a glucocorticoid and anti-inflammatory agent with weak systemic effects. Methylprednisolone aceponate is a selective glucocorticoid receptor Ligand. Methylprednisolone aceponate can be used for research of eczema and other inflammatory skin disorders <sup>[1][2][3]</sup> .   |               |   |         |              |                 |   |         |   |
| <b>In Vitro</b>    | Methylprednisolone aceponate inhibits collagenase promoter activity (in HeLa cells), LPS-induced IL-12p40 secretion (in human PBMCs) and phytohemagglutinin-induced IFN- $\gamma$ secretion (in human PBMCs) with IC <sub>50</sub> s of 9.3, 16.8, 15.2 nM <sup>[3]</sup> . Methylprednisolone aceponate induces MMTV promoter and TAT activities with EC <sub>50</sub> s of 21.8 and 20.5 nM respectively <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.  |               |   |         |              |                 |   |         |   |
| <b>In Vivo</b>     | <p>Methylprednisolone aceponate (topically applied, 50 <math>\mu</math>L, <math>\square</math>Coroton oil-induced Evan blue edema) shows anti-inflammatory effect with an IC<sub>50</sub> of 0.0015%, with low systemic side effect<sup>[1]</sup>.</p> <p>Methylprednisolone aceponate (0.0001%-0.1%, topically applied) inhibits oedema formation with ED<sub>50</sub> of 0.002% in irritant contact dermatitis in mice and rat<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Irritant contact dermatitis mice and rat<sup>[3]</sup></td> </tr> <tr> <td>Dosage:</td> <td>0.0001%-0.1%</td> </tr> <tr> <td>Administration:</td> <td>Topically applied, 10 <math>\mu</math>L for mice and 20 <math>\mu</math>L for rats.</td> </tr> <tr> <td>Result:</td> <td>Significantly inhibited ear inflammation.</td> </tr> </table> | Animal Model: | Irritant contact dermatitis mice and rat <sup>[3]</sup> | Dosage: | 0.0001%-0.1% | Administration: | Topically applied, 10 $\mu$ L for mice and 20 $\mu$ L for rats. | Result: | Significantly inhibited ear inflammation. |
| Animal Model:      | Irritant contact dermatitis mice and rat <sup>[3]</sup>  |               |   |         |              |                 |   |         |   |
| Dosage:            | 0.0001%-0.1%   |               |   |         |              |                 |   |         |   |
| Administration:    | Topically applied, 10 $\mu$ L for mice and 20 $\mu$ L for rats.  |               |   |         |              |                 |   |         |   |
| Result:            | Significantly inhibited ear inflammation.  |               |   |         |              |                 |   |         |   |

### REFERENCES

- [1]. Ruzicka T. Methylprednisolone aceponate in eczema and other inflammatory skin disorders -- a clinical update. *Int J Clin Pract.* 2006 Jan;60(1):85-92.
- [2]. H.J. Zentel, et al. Preclinical evaluation of a new topical corticosteroid methylprednisolone aceponate. 1994. 3 (s1), S32-S38.
- [3]. Schäcke H, et al. Characterization of ZK 245186, a novel, selective glucocorticoid receptor agonist for the topical treatment of inflammatory skin diseases. *Br J Pharmacol.* 2009 Oct;158(4):1088-103.

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

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