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## Product Data Sheet

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Product Name: Betamethasone hydrochloride

Cat. No.: GC35503

### Chemical Properties

Cas. No. 956901-32-9

SMILES C[C@@]12[C@](C[C@H](C)[C@]2(O)C(CO)=O)([H])[C@]3([H])CCC4=CC(C=C[C@]4(C)[C@@]3(F)[C@@H](O)C1)=O.Cl

|         |   |      |        |
|---------|---|------|--------|
| Formula | C <sub>22</sub> H <sub>30</sub> ClFO <sub>5</sub> | M.Wt | 428.92 |
|---------|---|------|--------|

|            |                 |         |                |
|------------|-----------------|---------|----------------|
| Solubility | Soluble in DMSO | Storage | Store at -20°C |
|------------|-----------------|---------|----------------|

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure 

### Background

Betamethasone is a synthetic corticosteroid.<sup>1</sup> *In vivo*, betamethasone (5 mg/kg) reduces bronchoalveolar lavage fluid (BALF) matrix metalloproteinase-2 (MMP-2) and MMP-9 activities, TNF- $\alpha$  levels, and neutrophil number in a mouse model of LPS-induced lung injury. Prenatal administration of betamethasone (0.1 mg/kg) improves neonatal lung function but decreases hippocampal and corpus callosum neuron density and induces motor function deficits in a rabbit model of late preterm birth.<sup>2</sup> It also extends gestational length in a rat model of preterm labor induced by high mobility group protein B1 (HMGB1).<sup>3</sup> Formulations containing betamethasone have been used in the treatment of inflammatory skin conditions and prenatally to promote fetal lung maturation.

1. Corbel, M., Lagente, V., Théret, N., et al. Comparative effects of betamethasone, cyclosporin and nedocromil sodium in acute pulmonary inflammation and metalloproteinase activities in bronchoalveolar lavage fluid from mice exposed to lipopolysaccharide. *Pulm. Pharmacol. Ther.* 12(3)165-171(1999) 2. van der Merwe, J., van

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

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der Veeken, L., Inversetti, A., et al. Neurocognitive sequelae of antenatal corticosteroids in a late preterm rabbit model *Am. J. Obstet. Gynecol.* 226(6)850.e851-850.e821(2022)

3. Galaz, J., Romero, R., Arenas-Hernandez, M., et al. Betamethasone as a potential treatment for preterm birth associated with sterile intra-amniotic inflammation: A murine study *J. Perinat. Med.* 49(7)897-906(2021)

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