Product Datasheet

Imiquimod, TLR7 ligand
NBP2-26228-1mg

Unit Size: 1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Reviews: 1  Publications: 11

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Updated 1/8/2020 v.20.1

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# NBP2-26228-1mg

## Imiquimod, TLR7 ligand

### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>1 mg</th>
</tr>
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<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td><strong>Buffer</strong></td>
<td>NBP2-26228-0.125mg: 125 ug in 50 uL of DMSO (this product was formerly supplied in sterile water) NBP2-26228-1mg: 1 mg in 400 uL of DMSO.</td>
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### Product Description

**Description**

Imiquimod, TLR7 ligand is an imidazoquinoline amine analog to guanosine. As a synthetic molecule of the Imidazoquinoline family, it has potent immunostimulatory activity. Imiquimod has been shown to activate only TLR7. This activation is MyD88 dependant and leads to the induction of the transcription factor NF-κB.

**Species**

Human, Mouse

**Specificity/Sensitivity**

Imiquimod is human/mouse TLR7 agonist.

**Notes**

5 mg size will be provided as 5 x 1.0 mg vials.

**Endotoxin Note**

<0.001 EU/ug

### Product Application Details

**Applications**

Functional, In vitro assay, Ligand Activation

**Recommended Dilutions**

Functional, In vitro assay, Ligand Activation

**Application Notes**

Formula: C14H16N4, HCl. Molecular weight: 276.8. This product is useful for activation of TLR7 and stimulation of TLR7 has been achieved with 5-10 ug/mL. Use in ligand activation, functional, and in vitro assays reported in scientific literature (PMID 25957979)

### Images

Imiquimod, TLR7 ligand [NBP2-26228] - 293T cells were transfected with pCMV/TLR7 plasmid and pNF-kB/SEAP plasmid using Lipofectamin 2000. After 48 hrs of transfection, 5 ug/mL of Imiquimod (R-837) was added. Cells were incubated at 37C for 24 hrs. Transfected cell supernatant was collected and analyzed using NF-kB SEAPorter Assay kit.

### Publications

Ye H, Pan J, Gong E et al. Inhibitory Effect of Immunologically Activated Mesenchymal Stem Cells on Lung Cancer Cell Growth and Metastasis Cancer biotherapy & radiopharmaceuticals Mar 26 2021 12:00AM [PMID: 33769841]

<table>
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<td>Hinks TSC, Marchi E, Jabeen M et al.</td>
<td>Activation and In Vivo Evolution of the MAIT Cell Transcriptome in Mice and Humans Reveals Tissue Repair Functionality</td>
<td>Cell Rep Sep 17 2019 12:00AM [PMID: 31533045] (In vivo, Human, Mouse)</td>
</tr>
<tr>
<td>Li Q, Ma Y, Li L et al.</td>
<td>Flagellin influences the expression of a variety of important cytokines and chemokines without affecting the immune status of umbilical cord mesenchymal stem cells.</td>
<td>Mol Med Rep 2015 Sep 01 [PMID: 26330280] (Func, in-vitro)</td>
</tr>
<tr>
<td>Zhang L, Liu D, Pu D et al.</td>
<td>The TLR7 agonist Imiquimod promote the immunogenicity of mesenchymal stem cells</td>
<td>Biological Research. 2015 Jan 17 [PMID: 25654296] (Human)</td>
</tr>
</tbody>
</table>

Details:
- Imiquimod, TLR7 ligand, ( Imgenex IMG-2207) was used for in-vitro stimulation experiments involving human heparinized cord or adult blood Monocytes, peripheral blood dendritic cells (DCs) and monocyte-derived DCs (MoDCs). Imiquimod was employed at 0.5 ug/mL concentration on Monocytes as well as on MoDCs and at 0.25 ug/mL on DCs. See full text for experimental details and results.
- Products cited: TLR ligands: TLR1/2 (IMG-2201), TLR3 (IMG-2203), TLR4 (IMG-2204), TLR5 (IMG-2205), TLR6/2 (IMG-2206), TLR7 (IMG-2207), TLR9 (IMG-2209Hpt). The effects of ligand stimulation was measured by various readout assays, refer to the figures for d
Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Support products are guaranteed for 6 months from date of receipt.

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