Product Datasheet
Flagellin, TLR5 Ligand
NBP2-25289

Unit Size: 0.01 mg

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

Publications: 11
Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NBP2-25289

Updated 12/10/2017 v.20.1

Earn rewards for product reviews and publications.
Submit a publication at www.novusbio.com/publications
Submit a review at www.novusbio.com/reviews/destination/NBP2-25289
### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>0.01 mg</th>
</tr>
</thead>
<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>Prepare dilutions by adding the appropriate amount of PBS or tissue culture media. Contents: 10 ug in 100 ul of PBS with 10% glycerol</td>
</tr>
</tbody>
</table>

### Product Description

<table>
<thead>
<tr>
<th><strong>Species</strong></th>
<th>Human, Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reactivity Notes</strong></td>
<td>Human reactivity reported in scientific literature (PMID: 24154872). Mouse reactivity reported in scientific literature (PMID: 25466255)</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Flagellin FliC from Salmonella Typhimurium (494 amino acid protein) is a highly conserved molecule among both gram-negative and gram-positive bacteria.</td>
</tr>
</tbody>
</table>

### Product Application Details

<table>
<thead>
<tr>
<th><strong>Applications</strong></th>
<th>Functional, In vitro assay, Ligand Activation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Dilutions</strong></td>
<td>Functional, In vitro assay, Ligand Activation</td>
</tr>
<tr>
<td><strong>Application Notes</strong></td>
<td>Activation of TLR5. Flagellin is a potent stimulator of innate immune responses in a number of eukaryotic cells and organisms, including both mammals and plants. In mammals, flagellin is recognized by TLR5 and triggers defense responses both systemically and at epithelial surfaces. Flagellin induces the activation of NF-KB and the production of cytokines and nitric oxide depending on the nature of the TLR5 signaling complex. Stimulation of TLR5 has been reported with 10-100 ng/ml. Use in functional reported in scientific literature (PMID: 24154872) Use in In vitro assay reported in scientific literature (PMID 25466255). Use in Ligand activation reported in scientific literature (PMID 25957979)</td>
</tr>
</tbody>
</table>
Flagellin, TLR5 Ligand [NBP2-25289] - TLR5 [NBP2-25289] - Flagellin specifically activated the TLR5-dependent NF-kB/SEAP reporter cells in a dose dependent manner but did not activate TLR2 or TLR4.
Publications

Ma Y, Zhang L, Li Q. Expression levels of cytokines and chemokines increase in human peripheral blood mononuclear cells stimulated by activation of the Toll-like receptor 5 pathway. Exp Ther Med 2015 Dec 04 [PMID: 26893651] (Human)


Mastorci K, Muraro E, Pasini E et al. Toll-Like Receptor 1/2 and 5 Ligands Enhance the Expression of Cyclin D1 and D3 and Induce Proliferation in Mantle Cell Lymphoma. PLoS ONE. Apr 29 2016 12:00AM [PMID: 27123851] (Func, Human)


Details:
Flagellin, TLR5 Ligand (Imgenex IMG-2205) 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). Flagellin was employed at 10 ng/mL concentration on Monocytes as well as on MoDCs and at 5 ng/mL on DCs. See full text for experimental details and results.


Details:
Fig 3C: Immortalized macrophages were stimulated with 50 ng/ml Flagellin.


Details:
Fig 6D: Flagellin (NBP2-25289) was used as a positive control to activate TLR5/NF-kB-SEAP reporter cells (NBP2-26277).


Details:
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

www.novusbio.com technical@novusbio.com
Procedures

MSDS (NBP2-25289)

Hazard Information
Chemical Name: Flagellin, Recombinant, TLR5 ligand
Chemical Formula: Flagellin from S.typhimurium
CAS Number: N/A
EEC-No: N/A

First Aid Measures
Eye Contact: May cause eye irritation.
Skin Contact: May cause skin irritation. May be harmful if absorbed through the skin.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

Fire Fighting Measures
Special risks: N/A
Suitable Extinguish Media: Water spray, carbon dioxide, dry chemical powder or appropriate foam.

Accidental Release Measures
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Consult a physician.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. SPEEDY ACTION IS CRITICAL!
Ingestion: If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. SPEED IS ESSENTIAL, OBTAIN MEDICAL AID IMMEDIATELY. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Notes: Consult a physician. Show this safety data sheet to the physician. Move away from the dangerous area.

Handling and Storage
Handling: Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Avoid inhalation. Use personal protective equipment (i.e. impermeable gloves, lab coat or apron).
Store at -20 degrees C. Store in a tightly closed container. Stable under recommended storage conditions.

Exposure Controls / Personal Protection

Physical and Chemical Properties
Form: Liquid
Color: Colorless
Odor: Odorless
Melting Point: No data available
Boiling Temperature: No data available
Density: No data available
Vapor Pressure: No data available
Solubility in Water: Very soluble
Flash Point: No data available
Explosion limits: No data available
Ignition Temperature: No data available

Stability and Reactivity
Stability: Stable
Hazardous Polymerization: Will not occur.
Materials to avoid: Strong oxidizing agents.
Hazardous Decomposition Products: Decomposition products are not hazardous.
HMIS Classification: Health Hazard 1, Flammability Hazard 0, Reactivity Hazard 0
NFPA Rating: Health Hazard 1, Fire 0, Reactivity Hazard 0.
Disposal Considerations
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Must not be disposed together with household garbage.

Other Information
The information contained in this material safety datasheet is believed to be accurate but it is the responsibility of the user or supplier to determine the applicability of these data to the formulation of necessary safety precautions. NOVUS shall not be held responsible for any damage resulting from the use of the above product or the information contained in this material safety data sheet.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
novus@novusbio.com

Novus Biologicals Canada
461 North Service Road West, Unit B37
Oakville, ON L6M 2V5
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada@novusbio.com

Novus Biologicals Europe
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: technical@novusbio.com
Orders: orders@novusbio.com
General: novus@novusbio.com

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NBP2-25289

Earn gift cards/discounts by submitting a publication using this product:
www.novusbio.com/publications