Technical Data Sheet

Protein Transport Inhibitor (Containing Monensin)

Product Information

Material Number: 554724
Size: 0.7 mL

Description

The ex vivo addition of BD GolgiStop™, a protein transport inhibitor containing monensin, to in vitro- or in vivo-stimulated lymphoid cells blocks their intracellular protein transport processes. This results in the accumulation of cytokines and/or proteins in the Golgi complex. The increased accumulation of cytokines in the cell enhances the detectability of cytokine-producing cells with flow cytometric analysis.

Investigators should note that the appearance of BD GolgiStop™ may range in color from clear (colorless) to a light yellow.

Preparation and Storage

Store undiluted at 4°C.

Application Notes

Application

| Intracellular staining (flow cytometry) | Routinely Tested |

Recommended Assay Procedure:

Stimulation of Cells: Various in vitro methods have been reported for stimulating cells to produce cytokines. Polyclonal activators have been particularly useful for inducing cytokine-producing cells. These activators include the following: concanavalin A, lipopolysaccharide, phorbol esters plus calcium ionophore or ionicymcin, phytohaemaglutinin, staphylocococcus, enterotoxin B, and monoclonal antibodies directed against subunits of the TCR/CD3 complex (with or without antibodies directed against costimulatory receptors, such as CD28).

Procedure for Using BD GolgiStop™: Add 4 µl of BD GolgiStop™ for every 6 mL of cell culture (e.g., ~10^6 cells/mL) and mix thoroughly. Treatment of stimulated cells for 4 to 6 hours with BD GolgiStop™ significantly increases the ability to detect cytokine-producing cells by immunofluorescent staining. It is recommended that BD GolgiStop™ not be kept in cell culture for longer than 12 hours.

As an alternative to BD GolgiStop™, investigators may wish to use BD GolgiPlug™, a protein transport inhibitor containing brefeldin A (Cat. No. 555029). BD GolgiStop™ and BD GolgiPlug™ have been found to have differential effects on intracellular cytokine staining that is time, activator and cytokine dependent. These factors must be considered when carrying out intracellular staining.

Danger: BD GolgiStop™ Protein Transport Inhibitor, containing monensin (component 51-2092KZ) contains 99.61% ethanol (w/w) and 0.26% monensin, mononatriumsalz (w/w).

Hazard statements:

Highly flammable liquid and vapor.  
Causes serious eye irritation.  
Harmful if swallowed.

Precautionary statements:

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Wear protective gloves / eye protection.  
Wear protective clothing.  
If on skin (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If swallowed: Call a POISON CENTRE/doctor if you feel unwell. Rinse mouth.  
Dispose of contents / container in accordance with local / regional / national / international regulations. Keep container tightly closed.

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>555028</td>
<td>BD Cytofix/Cytoperm Plus Kit (with BD GolgiPlug)</td>
<td>250 Tests</td>
<td>(none)</td>
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<tr>
<td>554715</td>
<td>BD Cytofix/Cytoperm Plus Kit (with BD GolgiStop)</td>
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<tr>
<td>555029</td>
<td>Protein Transport Inhibitor (Containing Brefeldin A)</td>
<td>1 mL</td>
<td>(none)</td>
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</table>
Product Notices

1. Please refer to wwwbdbiosciences.com/pharmingen/protocols for technical protocols.

References


