BD FastImmune™ Anti-Human IL-8 (AS14)

**Form**  | **Catalog number**  
--- | ---  
FITC | 340509  
PE | 340510

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

**RESEARCH APPLICATIONS**

Research applications include studies of:

- Sepsis, endotoxemia, and inflammatory responses\(^1,2,3,4\)
- Angiogenesis\(^5\)
- Chemotaxis\(^6,7,8\)
- Leucocyte/endothelial interactions\(^9\)
- Graft-versus-host disease\(^10\)
- Autocrine growth factors\(^11\)
- Chemokine interactions\(^12,13,14,15\)
- Neutrophil activation\(^16,17\)
- Intracellular cytokines\(^18\)
- Rheumatoid arthritis\(^19\)

**DESCRIPTION**

**Specificity**

The Anti-Human Interleukin-8 (Anti-Hu–IL-8) antibody recognizes a nonglycosylated protein of approximately 8 kilodaltons (kDa).\(^6\)

**Antigen distribution**

The Human Interleukin-8 antibody (previously known as neutrophil attractant/activating protein, NAP-1, and as monocyte-derived neutrophil chemotactic factor, MDNCF) is a member of a superfamily of proinflammatory cytokines that have been termed chemokines because they are chemoattractants for leucocytes.\(^6,12,16,20,21\) Chemokines are 70- to 80-residue proteins with four conserved cysteines.\(^22\) IL-8 is designated as a CXC chemokine due to an amino acid separating the first two of four conserved cysteines.\(^22\) IL-8 is a homodimer in solution.\(^23\) There are two major forms of IL-8: a 72-amino acid form (72-AA), and a 77-amino acid form (77-AA). While both forms are biologically active, the 72-AA form is produced primarily by monocytes and is more potent than the 77-AA form that is produced mainly by endothelial cells.\(^24\)

The IL-8 antibody is a chemoattractant for neutrophils, T-lymphocytes, and basophils.\(^6,20,7\) It activates neutrophils, and it possesses angiogenic activity.\(^6,5\) IL-8 is primarily produced and secreted by monocytes, but it is also expressed by endothelial cells, fibroblasts, keratinocytes, T lymphocytes, LGLs, B-chronic lymphocytic leukemia (B-CLL) cells, and human malignant melanoma cells.\(^8,11,22,25-31\) Phagocytosing neutrophils produce and release high amounts of IL-8.\(^32\) IL-8 is produced by monocytes in response to IL-1\(β\), TNF-\(α\), lipopolysaccharide (LPS), and PHA.\(^1,12,33,34\) Lymphocyte-derived IL-4 and monocyte-derived IL-10 inhibit the production of IL-8 by monocytes.\(^13-15\) IL-8 response to LPS is relatively short lived; a more sustained, secondary response is elicited in response to TNF-\(α\) and IL-1.\(^33,35\)

For Research Use Only. Not for use in diagnostic or therapeutic procedures.
Clone

The Anti-Hu–IL-8 antibody, clone AS14, is derived from the hybridization of P3X63Ag8 mouse cells with spleen cells from BALB/c mice immunized with recombinant human IL-8.

Composition

The Anti-Hu–IL-8 antibody is composed of mouse IgG1 heavy chains and kappa light chains.

Product configuration

The following reagents are supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

<table>
<thead>
<tr>
<th>Form</th>
<th>Number of tests</th>
<th>Volume per test (µL)</th>
<th>Amount provided (µg)</th>
<th>Total volume (mL)</th>
<th>Concentration (µg/mL)</th>
<th>Stabilizer</th>
<th>Preservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>FITC</td>
<td>50</td>
<td>20</td>
<td>3.0</td>
<td>1.0</td>
<td>3.0</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
<tr>
<td>PE</td>
<td>50</td>
<td>20</td>
<td>1.5</td>
<td>1.0</td>
<td>1.5</td>
<td>Gelatin</td>
<td>0.1% Sodium azide</td>
</tr>
</tbody>
</table>

a. Volume required to stain 10⁶ cells.

PROCEDURE

Visit our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash protocol for direct immunofluorescence.

Method for Intracellular Cytokine Detection

Abbreviated Intracellular Staining Procedure: After surface staining activated whole blood with fluorescent-conjugated monoclonal antibodies, lyse the red blood cells by adding 2 mL of 1X BD FACSTM lysing solution (Cat. No. 349202). Vortex gently and incubate for 5 to 10 minutes at room temperature. Centrifuge at 500 x g for 5 minutes; remove the supernatant. Add 500 µL of 1X BD FACSTM Permeabilizing Solution 2 (Cat. No. 347692). Vortex and incubate for 10 minutes at room temperature in the dark. Wash by adding PBS containing 0.5% bovine serum albumin (BSA) and 0.1% sodium azide (NaN₃), and centrifuge for 5 minutes. Add 20 µL of fluorescent-conjugated intracellular antibodies. Vortex and incubate for 30 minutes at room temperature in the dark. Repeat wash step. Resuspend cells in 1% paraformaldehyde in PBS.

REPRESENTATIVE DATA

Flow cytometric analysis was performed on activated lysed whole blood with a gate set on CD45⁺ mononuclear cells. Laser excitation was at 488 nm.
Figure 1 Four-hour LPS–activated lysed whole blood analyzed with a BD FACSTM brand flow cytometer

HANDLING AND STORAGE
Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

WARNING
All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection36,37 and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

CHARACTERIZATION
To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

WARRANTY
Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

REFERENCES


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