cells are essentially CD8α molecule as an The majority of Tc cells express the CD8α lower density by a subset of NK cells (7). The CD8 molecule is a disulfide-linked dimer with a molecular weight of 29-33 kDa (5). The CD8 antigen is expressed by the “cytotoxic / suppressor” T lymphocytes subpopulation (Tc cells) and with an expression of 32 – 34 kDa (6). The CD8 antigen is found on B-lymphocytes, the HLA-DR is only expressed on T-lymphocytes, the HLA-DR is also expressed on hematopoietic progenitor cells at some stages of differentiation (2, 4). The B8.12.2 monoclonal antibody (mAb) reacts with the CD8 molecule (6). It has been assigned to the CD8 cluster of differentiation during the 1st International Workshop on Human Leucocyte Differentiation Antigens in Paris, France, in 1982 (9).

**SPECIFICITY**

The human major histocompatibility complex (MHC), also called human leucocyte antigens (HLA), is composed of three groups of molecules designated MHC class I, class II and class III. The MHC class II genomic region, or HLA-D region, contains the genes encoding HLA-DR, -DQ and -DP antigens (1, 2). The MHC class II molecules are built by the non-covalent association of α/β heterodimers. Both heavy (α) and light (β) chains span the cell membrane (1). They have molecular weights of 31 – 33 kDa and 26 – 29 kDa respectively. The HLA-DR is composed of two heavy (α) and two light (β) chains. Both α and β subunits have a molecular weight (Mr) of 32 – 34 kDa (6). The CD8 antigen is expressed by the "cytotoxic / suppressor" T lymphocytes subpopulation (Tc cells) and with a lower density by a subset of NK cells (7). The majority of Tc cells express the CD8 molecule as an α/β heterodimer whereas NK cells are essentially CD8α/β (or CD8α/α) (7, 8). The B9.11 mAb reacts with the α subunit of the CD8 molecule (6). It has been assigned to the CD8 cluster of differentiation during the 1st International Workshop on Human Leucocyte Differentiation Antigens in Paris, France, in 1982 (9).

**REAGENT COMPONENTS**

<table>
<thead>
<tr>
<th>Specificity</th>
<th>Specifications of constituent 1</th>
<th>Specifications of constituent 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clone</td>
<td>B8.12.2</td>
<td>B9.11</td>
</tr>
<tr>
<td>Hybridoma</td>
<td>NS1 x Balb/c</td>
<td>NS1 x Balb/c</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Human HLA A6 cytotoxic T-cell clone</td>
<td>Human HLA A2 cytotoxic T-cell clone</td>
</tr>
<tr>
<td>Ig Chain</td>
<td>IgG2b</td>
<td>IgG1</td>
</tr>
<tr>
<td>Species</td>
<td>Mouse</td>
<td>Mouse</td>
</tr>
<tr>
<td>Source</td>
<td>Ascites fluid</td>
<td>Ascites fluid</td>
</tr>
<tr>
<td>Purification</td>
<td>Ion exchange or affinity chromatography</td>
<td>Ion exchange or affinity chromatography</td>
</tr>
<tr>
<td>Conjugation</td>
<td>FITC (Fluorescein isothiocyanate)</td>
<td>PE (Phycocerythrin)</td>
</tr>
<tr>
<td>Molar Ratio</td>
<td>FITC / Ig: 5 – 7</td>
<td>PE / Ig: 0.5 – 1.5</td>
</tr>
<tr>
<td>λ Excitation range</td>
<td>468 – 509 nm</td>
<td>486 – 580 nm</td>
</tr>
<tr>
<td>λ Emission range</td>
<td>504 – 541 nm (green)</td>
<td>568 – 590 nm (Orange)</td>
</tr>
</tbody>
</table>
| Buffer      | Buffer (PBS pH 7.2) plus 2 mg / mL BSA and 0.1% NaN3 |}

**EVIDENCE OF DETERIORATION**

Any change in the physical appearance of this FITC- and PE-labeled combination (clear, yellowish-green to pinkish liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

**STATEMENT OF WARNINGS**

1. Minimize exposure to light.
2. Avoid contact of samples with skin or eyes.
3. Avoid deposits in metal piping in which azide can occur.
4. Do not expose reagents to strong light during storage or incubation.
5. The B9.11 mAb reacts with the α subunit of the CD8 molecule (6). It has been assigned to the CD8 cluster of differentiation during the 1st International Workshop on Human Leucocyte Differentiation Antigens in Paris, France, in 1982 (9).

**SELECTED RESEARCH REFERENCES**

5. Rebai, N., Malissen, B., Pierres, M., Acolla, R.S., Corte, G., Mawas, C., "Distinct HLA-DR epitopes and distinct families of HLA-DR molecules defined by 15 monoclonal antibodies (mAb) either anti-DR or allo-anti-Iak cross-reacting with human DR molecule I. Cross-inhibition studies of mAb cell surface fixation and differential binding of mAb to detergent-solubilized HLA molecules immobilized to a solid phase by a first mAb", 1983, Eur. J. Immunol., 13, 106-111.

(*) 20 µL is the quantity of product sufficient to stain 5 x 10^6 cells in a standard immunofluorescence assay

**REAGENT PREPARATION**

1. Bring reagent to 18 – 25°C prior to use.
2. Let it come to room temperature (18 – 25°C) before use.
3. All specimens and samples must be considered as potentially infectious and must be handled with care (in particular: the wearing of protective gloves, gowns and gowns).
4. Do not use reagent beyond the expiration date on the vial label. Bring reagent to 18 – 25°C prior to use.
5. Rebai, N., Malissen, B., Pierres, M., Acolla, R.S., Corte, G., Mawas, C., "Distinct HLA-DR epitopes and distinct families of HLA-DR molecules defined by 15 monoclonal antibodies (mAb) either anti-DR or allo-anti-Iak cross-reacting with human DR molecule I. Cross-inhibition studies of mAb cell surface fixation and differential binding of mAb to detergent-solubilized HLA molecules immobilized to a solid phase by a first mAb", 1983, Eur. J. Immunol., 13, 106-111.
IOTest® HLA-DR-FITC / CD8-PE
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(*) 20 µL is the quantity of product sufficient to stain 5 x 10^5 cells in a standard immunofluorescence assay