Background/Target Information

The ability of T cell receptors (TCR) to discriminate foreign from self-peptides presented by major histocompatibility complex (MHC) class II molecules is essential for an effective adaptive immune response. TCR recognition of self-peptides has been linked to autoimmune disease. Mutant self-peptides have been associated with tumors. Engagement of TCRs by a family of bacterial toxins known as superantigens has been responsible for toxic shock syndrome.

Antibodies to Vbeta segments of T cell receptors have been isolated from patients with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). The antibodies block TH1-mediated inflammatory autodestructive reactions and are believed to be a method by which the immune system compensates for disease. Most human T cells express the TCR alpha-beta and either CD4 or CD8 molecule (single positive, SP). A small number of T cells lack both CD4 and CD8 (double negative, DN). Increased percentages of alpha-beta DN T cells have been identified in some autoimmune and immunodeficiency disorders. Gamma-delta T cells are primarily found within the epithelium. They show less TCR diversity and recognize antigens differently than alpha-beta T cells. Subsets of gamma-delta T cells have shown antitumor and immunoregulatory activity.

TCR V alpha 2 Antibody (TCR2663)
The specificity of FITC labeled anti-TCR V alpha 2 (F1) monoclonal antibody (Product # TCR2663) was demonstrated by the flow cytometry detection of TCR V alpha 2 (F1) on TCR V alpha 2 positive MOLT16 cells (left panel) compared to negative control HPB-ALL cells (right panel). [RE]

TCR V alpha 2 Antibody (TCR2663) in Flow
Flow cytometry analysis of TCR V alpha 2 (F1) on TCR V alpha 2 positive MOLT16 cells (left panel) or negative control HPB-ALL cells (right panel). Equal numbers of cells were stained with a FITC labeled TCR V alpha 2 (F1) monoclonal antibody (Product # TCR2663), or were left unstained. 5 µL of primary antibody were used per test. All antibody incubations were performed for 30 minutes at room temperature. A representative 10,000 cells were acquired for each sample.
### PubMed References For TCR V alpha 2 Monoclonal Antibody (F1), FITC

#### 1 Western Blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Human / Not Cited</td>
<td>TCR2663 was used in western blot to study the effect of the Wilms tumor antigen 1 disruption</td>
</tr>
</tbody>
</table>

**Source:** Journal of immunology (Baltimore, Md. : 1950) (Nov 2007; 179: 5803)  
**Title:** "Targeting the Wilms tumor antigen 1 by TCR gene transfer: TCR variants improve tetramer binding but not the function of gene modified human T cells."  
**Author(s):** Thomas S,Xue SA,Cesco-Gaspere M, San José E,Hart DP, Wong V, Debets R, Alarcon B, Morris E, Stauss HJ  
**PubMed Article URL:** http://dx.doi.org/10.4049/jimmunol.179.9.5803

#### 4 Immunohistochemistry References

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<th>Species / Dilution</th>
<th>Summary</th>
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<tr>
<td>Human / 1:80</td>
<td>TCR2663 was used in immunohistochemistry to study the roles of intestinal mucosa in the pathogenesis of IgA nephropathy</td>
</tr>
</tbody>
</table>

**Source:** Kidney international (Jun 1999; 55: 2274)  
**Title:** "Small bowel T cells, HLA class II antigen DR, and GroEL stress protein in IgA nephropathy."  
**Author(s):** Rantala I, Collin P, Holm K, Kainulainen H, Mustonen J, Mäki M  
**PubMed Article URL:** http://dx.doi.org/10.1046/j.1523-1755.1999.00471.x

| Human / Not Cited | TCR2663 was used in immunohistochemistry to characterize T cell lymphoma cells from a Sezary syndrome patient |

**Source:** The American journal of surgical pathology (Aug 1998; 26: 450)  
**Title:** "Hypopigmented mycosis fungoides: frequent expression of a CD8+ T-cell phenotype."  
**Author(s):** El-Shabrawi-Caelen L, Cerroni L, Medeiros LJ, McCalmont TH  
**PubMed Article URL:** http://dx.doi.org/10.1097/00000478-200204000-00006

| Human / 1:10 | TCR2663 was used in immunohistochemistry to investigate the expression of laminins, fibronectin, and tenascin in celiac intestinal mucosa |

**Source:** The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society (Jul 2000; 48: 1011)  
**Title:** "Unaltered distribution of laminins, fibronectin, and tenascin in celiac intestinal mucosa."  
**Author(s):** Korhonen M, Ormio M, Burgeson RE, Virtanen I, Savilahti E  
**PubMed Article URL:** http://dx.doi.org/10.1177/0022155400048014

| Human / 1:100 | TCR2663 was used in immunohistochemistry to investigate the expression and distribution of laminins, fibronectin, and tenascin in celiac intestinal mucosa |

**Source:** The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society (Jul 2000; 48: 1011)  
**Title:** "Unaltered distribution of laminins, fibronectin, and tenascin in celiac intestinal mucosa."  
**Author(s):** Korhonen M, Ormio M, Burgeson RE, Virtanen I, Savilahti E  
**PubMed Article URL:** http://dx.doi.org/10.1177/002215540004800714

#### 1 Flow Cytometry References

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<tr>
<td>Non-human primate / Not Cited</td>
<td>TCR2663 was used in flow cytometry to investigate the variants of T-cell receptors in macaques</td>
</tr>
</tbody>
</table>

**Source:** Journal of clinical immunology (Jul 1991; 11: 193)  
**Title:** "Characterization of T-cell subsets and T-cell receptor subgroups in pigtailed macaques using two- and three-color flow cytometry."  
**Author(s):** Axberg I, Gale MJ, Aflar B, Clark EA  
**PubMed Article URL:** http://dx.doi.org/10.1007/BF00917425

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