Technical Data Sheet

Purified Mouse Anti-Rat CD8a

Product Information

Material Number: 550298
Alternate Name: Cd8a; CD8α; CD8 alpha; OX-8 membrane antigen
Size: 1.0 ml
Concentration: 15.625 µg/ml
Clone: OX-8
Immunogen: High-molecular-weight rat thymocyte glycoproteins
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Rat
Storage Buffer: Aqueous buffered solution containing BSA, goat serum, and ≤ 0.09% sodium azide.

Description

The OX-8 antibody reacts with the hinge-like membrane-proximal domain of the 32 kDa α chain of the CD8 differentiation antigen. A truncated CD8 α isoform has not been detected in the rat. The CD8 α and β chains (CD8α and CD8β, respectively) form a heterodimer on the surface of most thymocytes and a subpopulation of mature T lymphocytes (i.e., MHC class I-restricted T cells, including most T suppressor/cytotoxic cells). Intestinal intraepithelial lymphocytes, many CD8+ T cells of athymic rats, many activated CD4+ T cells, and most NK cells express CD8α without CD8β. It has been suggested that the expression of the CD8α/CD8β heterodimer is restricted to thymus-derived T lymphocytes. OX-8 antibody does not react with resting CD4+ T helper cells. CD8 is an antigen coreceptor on the T-cell surface which interacts with MHC class I molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase lck. Macrophages have also been reported to express CD8 α and β chains, which are involved in signal transduction. Soluble OX-8 mAb partially blocks in vitro MLR and CTL activity.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

<table>
<thead>
<tr>
<th>Application</th>
<th>Tested During Development</th>
<th>Reported</th>
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<tbody>
<tr>
<td>Flow cytometry</td>
<td>Routinely Tested</td>
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<tr>
<td>Immunohistochemistry-frozen</td>
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<tr>
<td>Immunohistochemistry-formalin (antigen retrieval required)</td>
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<td>Immunohistochemistry-zinc-fixed</td>
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<td>Immunohistochemistry-paraffin</td>
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<tr>
<td>Immunoprecipitation</td>
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<td>Immunoaffinity Chromatography</td>
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<tr>
<td>Western blot</td>
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<tr>
<td>Blocking</td>
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Immunohistochemical staining of Rat T lymphocytes.

The paraffin-embedded section of normal rat spleen was stained with Purified Mouse Anti-Rat CD8a (Cat. No. 550298). CD8+ lymphocytes around the central arterioles of the white pulp are identified by the brown staining.

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550298 Rev. 2
Recommended Assay Procedure:

**Immunohistochemistry:** The OX-8 antibody is recommended to test for immunohistochemical staining of acetone-fixed frozen sections and paraffin sections. For paraffin sections no pretreatment is required. Tissues tested were rat spleen and thymus. The antibody stains the CD8 subset of T lymphocytes. The isotype control recommended for use with this antibody is purified mouse IgG1 (Cat. No. 550878). For optimal indirect immunohistochemical staining, the OX-8 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with biotinylated polyclonal anti-mouse Ig (multiple adsorbed) (Cat. No. 550337) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). More conveniently, the anti-mouse Ig HRP detection kit (Cat. No. 551011) that contains the biotinylated secondary antibody, antibody diluent, streptavidin-HRP and DAB substrate can be used for staining. For more protocol information please visit [http://wwwbdbiosciencescom/resources/cellbiology/index.jsp](http://wwwbdbiosciencescom/resources/cellbiology/index.jsp).

**Suggested Companion Products**

<table>
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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>550337</td>
<td>Biotin Goat Anti-Mouse Ig (Multiple Adsorption)</td>
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<td>Polyclonal</td>
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<tr>
<td>550880</td>
<td>DAB Substrate Kit</td>
<td>500 tests</td>
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<td>550946</td>
<td>Streptavidin HRP</td>
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<td>551011</td>
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<td>550878</td>
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<td>MOPC-31C</td>
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<td>Antibody Diluent for IHC</td>
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**Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
6. An isotype control should be used at the same concentration as the antibody of interest.
7. Please refer to [wwwbdbiosciencescom/pharmingen/protocols](http://wwwbdbiosciencescom/pharmingen/protocols) for technical protocols.

**References**


Wallgren AC, Karlsson-Parra A, Korsgren O. The main infiltrating cell in xenograft rejection is a CD4+ macrophage and not a T lymphocyte. *Transplantation.* 1985; 60(8):604-601. (Clone-specific: Immunohistochemistry)