Technical Data Sheet

Purified Mouse Anti-Rat CD90/Mouse CD90.1

Product Information

Material Number: 554895
Alternate Name: Rat Thy-1; Mouse Thy-1.1
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: OX-7
Immunogen: Rat thymocyte Thy-1 antigen
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Rat
Reported: Guinea Pig, Rabbit
Aqueous buffered solution containing ≤0.09% sodium azide.

Storage Buffer:

Description

CD90 (Thy-1) is a GPI-anchored membrane glycoprotein of the Ig superfamily which is involved in signal transduction. The OX-7 clone reacts with rat CD90 reported to be expressed by hematopoietic stem cells, erythroid cells, immature B lymphocytes in the bone marrow & peripheral lymphoid organs, thymocytes, recent thymic emigrants (a subset of CD45RC- peripheral T lymphocytes), neurons, glomerular mesangial cells, endothelium at inflammatory sites, mast cells, and dendritic cells. Rat dendritic epidermal T cells (DEC) have been reported to be CD90 (Thy-1) negative, unlike those of the mouse.

The OX-7 clone has been reported to crossreact with the mouse CD90.1 (Thy-1.1) alloantigen of the AKR/J and PL strains, but not CD90.2 (Thy-1.2) found on many mouse strains. In the mouse, CD90 is found on thymocytes, most peripheral T lymphocytes, some intraepithelial T lymphocytes (IEL, DEC), hematopoietic stem cells, and neurons, but not B lymphocytes. In addition, there is evidence that CD90 mediates adhesion of mouse thymocytes to mouse thymic stroma. The OX-7 clone has also been reported to crossreact with rabbit and guinea pig thymus, brain, and intestine.

Preparation and Storage

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

Store undiluted at 4°C.
Application Notes

Application

<table>
<thead>
<tr>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunohistochemistry-zinc-fixed</td>
<td>Tested During Development</td>
</tr>
<tr>
<td>Immunohistochemistry-frozen</td>
<td>Reported</td>
</tr>
<tr>
<td>Electron microscopy</td>
<td>Reported</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>Reported</td>
</tr>
<tr>
<td>Western blot</td>
<td>Reported</td>
</tr>
<tr>
<td>Immunohistochemistry-formalin (antigen retrieval required)</td>
<td>Not Recommended</td>
</tr>
</tbody>
</table>

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554833</td>
<td>PE Mouse Anti-Rat CD3</td>
<td>0.2 mg</td>
<td>G4.18</td>
</tr>
<tr>
<td>553443</td>
<td>FITC Rat Anti-Mouse IgG</td>
<td>0.5 mg</td>
<td>A85-1</td>
</tr>
<tr>
<td>557273</td>
<td>Purified Mouse IgG1, κ Isotype Control</td>
<td>0.5 mg</td>
<td>MOPC-31C</td>
</tr>
</tbody>
</table>

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. 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 use of freshly prepared cultures and discard antibodies not recommended for intravenous and in vivo use.
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.

References

Hosseinzadeh H, Goldschneider I. Recent thymic emigrants in the rat express a unique antigenic phenotype and undergo post-thymic maturation in peripheral lymphoid tissues. *J Immunol.* 1993; 150(5):1670-1679. (Biology)
Payer E, Elbe A, Stingl G. Circulating CD3+ T cell receptor V gamma 3+ fetal murine thymocytes home to the skin and give rise to proliferating dendritic epidermal T cells. *J Immunol.* 1991; 146(8):2538-2543. (Biology)