Technical Data Sheet

Purified Rat Anti-Mouse 4-1BB Ligand

Product Information

Material Number: 550532
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: TKS-1
Immunogen: BALB/c mouse B lymphoma line 2PK-3
Isotype: Rat (SD) IgG2a, κ
Reactivity: QC Testing: Mouse

Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description
The TKS-1 antibody reacts with 4-1BB Ligand (4-1BBL), a 97kDa member of the NGF/TNF superfamily which is present on antigen-presenting cells and activated B lymphocytes. 4-1BBL interacts with 4-1BB (CDw137), found predominantly on activated T lymphocytes. This ligand-receptor pair is grouped with pairs such as CD27/CD70, CD30/CD153, OX-40/OX-40L, CD80/CD86, and CD86/CD28, which costimulate T-cell proliferation and cytokine production. The interaction of 4-1BB with 4-1BBL may be reciprocally costimulatory in that 4-1BBL may deliver proliferative signals to B lymphocytes activated by anti-IgM. The TKS-1 mAb stains B cells activated for three days with anti-IgM polyclonal antibody, consistent with an earlier report that soluble 4-1BB-alkaline phosphatase fusion protein binds to anti-IgM-activated B cells. Furthermore, 4-1BBL mRNA has been detected in activated T lymphocytes and activated macrophages. The TKS-1 mAb has been reported to inhibit the binding of soluble 4-1BB to 4-1BBL transfectants and block the in vitro costimulation of T-lymphocyte proliferation by 4-1BBL transfectants.

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

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<thead>
<tr>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
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<tbody>
<tr>
<td>Blocking</td>
<td>Reported</td>
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Recommended Assay Procedure:
Because of the low density expression of 4-1BBL on activated B lymphocytes, we recommend the use of a bright second-step reagent, such as PE-conjugated anti-rat Ig polyclonal antibody (Cat. No. 550767). Other reported applications include the blocking of the functional interaction of 4-1BBL with 4-1BB.
Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>550767</td>
<td>PE Goat Anti-Rat Ig</td>
<td>0.2 mg</td>
<td>Polyclonal</td>
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<tr>
<td>553927</td>
<td>Purified Rat IgG2a, κ Isotype Control</td>
<td>0.5 mg</td>
<td>R35-95</td>
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<tr>
<td>553087</td>
<td>FITC Rat Anti-Mouse CD45R/B220</td>
<td>0.1 mg</td>
<td>RA3-6B2</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. 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.
4. 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.

References