Technical Data Sheet

Purified Mouse Anti-Granzyme B

Product Information

Material Number: 550558
Size: 50 µg
Concentration: 0.5 mg/ml
Clone: 2C5/F5
Isotype: Mouse IgG2a
Reactivity: QC Testing: Human
Tested in Development: Rat
Target MW: 32 kDa
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The primary mechanism by which cytotoxic T cells eliminate virally infected cells is by granule exocytosis. The release of cytotoxic granule contents by cytotoxic T lymphocytes (CTL) triggers apoptotic target cell death. CTL granules contain a poreforming protein, perforin, and a group of serine proteases called granzymes. In the classic model, perforins create holes in the target cell membrane, allowing entrance of the granzymes. Granzyme A and B are the predominant granzymes activated after CTL activation, but each act via an independent apoptotic pathway; granzyme B is activated immediately, while granzyme A acts hours later. The physiological substrates for granzyme A in the apoptotic pathway have not been identified. Studies involving mice which are deficient in both granzyme A and B suggest a model whereby the granzyme B pathway may have evolved as the major apoptotic pathway with the granzyme A pathway acting as a backup. Granzyme B has been shown to induce apoptosis and to cleave a number of substrates which are similar in specificity to those of the caspase family of proteins. Granzyme B can cleave substrates, such as DNA-PKcs, and nuclear mitotic apparatus protein (NuMA). Furthermore, Granzyme B can also cleave substrates such as Bid and DFF45 in a caspase-independent fashion. However, further research is needed to delineate the exact role of caspases in cytotoxic T lymphocyte-induced apoptosis involving Granzyme B. Granzyme B migrates at approximately 32 kDa in SDS/PAGE. Clone 2C5/F5 recognizes human and rat granzyme B.

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

Western blot Routinely Tested

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1.0 ml</td>
<td>(none)</td>
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Product Notices

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

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2. 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


