Technical Data Sheet

V450 Mouse Anti-Human Bcl-2

Product Information

<table>
<thead>
<tr>
<th>Material Number:</th>
<th>560637</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>50 tests</td>
</tr>
<tr>
<td>Vol. per Test:</td>
<td>5 µl</td>
</tr>
<tr>
<td>Clone:</td>
<td>Bcl-2/100</td>
</tr>
<tr>
<td>Immunogen:</td>
<td>Human Bcl-2 synthetic peptide aa. 41-54</td>
</tr>
<tr>
<td>Isotype:</td>
<td>Mouse IgG1, κ</td>
</tr>
<tr>
<td>Reactivity:</td>
<td>QC Testing: Human</td>
</tr>
<tr>
<td>Storage Buffer:</td>
<td>Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.</td>
</tr>
</tbody>
</table>

Description

Programmed cell death (apoptosis) is a normal physiologic process which occurs during embryonic development as well as in maintenance of tissue homeostasis. The apoptotic program is characterized by certain morphological features. These include changes in the plasma membrane such as loss of membrane asymmetry and attachment, a condensation of the cytoplasm and nucleus, and internucleosomal cleavage of DNA. In the final stages, the dying cells become fragmented into “apoptotic bodies” which are rapidly eliminated by phagocytic cells without eliciting significant inflammatory damage to surrounding cells. Members of the Bcl-2 family play a major role in regulating the response of cells to apoptotic signals. Bcl-2 is considered to be novel among proto-oncogenes because it blocks apoptosis in many cell types. Bcl-2 is thought to provide selective survival advantage for cells by blocking apoptosis and thus may contribute to tumorigenesis. Bcl-2 is a ~26 kDa intracellular, integral membrane protein found primarily in the nuclear envelope, endoplasmic reticulum and outer mitochondrial membrane.

Clone Bcl-2/100 reacts with human Bcl-2. It has been reported not to cross-react with mouse Bcl-2. A synthetic peptide corresponding to amino acids 41-54 (GAAPAPGIFSSQPG) of human Bcl-2 was used as the immunogen. This peptide sequence reportedly is not conserved between human and mouse.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.

Flow cytometric analysis for Bcl-2 in human PBMC.

Human PBMC were fixed and permeabilized using BD Cytofix/Cytoperm™ (Cat. No. 554714) followed by staining either with a BD Horizon™ V450 Mouse IgG1, κ isotype control (unshaded) or with the BD Horizon™ V450 Mouse Anti-Human Bcl-2 antibody (shaded). Histograms were derived from gated events based on light scattering characteristics for lymphocytes. Flow cytometry was performed on a BD™ LSR II flow cytometry system.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

BD Biosciences

bbbiosciences.com

For country-specific contact information, visit bbbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or convey any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale. BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2011 BD
Application Notes

Intracellular staining (flow cytometry) Routinely Tested

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>560373</td>
<td>V450 Mouse IgG1, κ Isotype Control</td>
<td>0.1 mg</td>
<td>MOPC-21</td>
</tr>
<tr>
<td>555899</td>
<td>Lysing Buffer</td>
<td>100 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>554714</td>
<td>BD Cytofix/Cytoperm™ Fixation/Permeabilization Kit</td>
<td>250 tests</td>
<td>(none)</td>
</tr>
<tr>
<td>554722</td>
<td>Fixation and Permeabilization Solution</td>
<td>125 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>554723</td>
<td>Perm/Wash Buffer</td>
<td>100 ml</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References


Louie DC, Kant JA, Brooks JJ, Reed JC. Absence of t(14;18) major and minor breakpoints and of Bcl-2 protein overproduction in Reed-Sternberg cells of Hodgkin's disease. Am J Pathol. 1991; 139(6):1231-1237. (Biology)


Reed JC, Tsujimoto Y, Alpers JD, Croce CM, Nowell PC. Regulation of bcl-2 proto-oncogene expression during normal human lymphocyte proliferation. Science. 1987; 236(4800):1295-1299. (Biology)


Yin XM, Oltvai ZN, Korsmeyer SJ. BH1 and BH2 domains of Bcl-2 are required for inhibition of apoptosis and heterodimerization with Bax. Nature. 1994; 369(6478):321-323. (Biology)