Technical Data Sheet

Purified Rabbit Anti-Caspase-12 w/ Control

Product Information

| Material Number: | 551430 | | |
|------------------|--|--|--|
| Size: | 100 µl | | |
| Reactivity: | QC Testing: Mouse | | |
| · | Reported: Human, Rat | | |
| Component: | 51-16586N | | |
| Description: | Mouse spleen control lysate | | |
| Size: | 50 µg (1 ea) | | |
| Concentration: | 1.0 mg/ml | | |
| Storage Buffer: | SDS-PAGE buffer (62mM Tris pH 6.8, 2% SDS, 0.9% b-mercaptoethanol, | | |
| 0 | 0.003% bromophenol blue, 5% glycerol) | | |
| Component: | 51-8104KC | | |
| Description: | Purified Rabbit Anti-Caspase-12 | | |
| Size: | 100 µl (1 ea) | | |
| Clone Name: | Polyclonal | | |
| Immunogen: | Murine Caspase-12 peptide aa. 2-17 | | |
| Isotype: | Rabbit Ig | | |
| Storage Buffer: | Aqueous buffered solution containing $\leq 0.09\%$ sodium azide. | | |

Description

Caspases are a family of cysteine proteases that are key mediators of programmed cell death or apoptosis. The precursor forms of caspases are composed of a prodomain, and large and small catalytic subunits. The active forms of caspases are generated by several stimuli including ligand-receptor interactions, growth factor deprivation, and inhibitors of cellular functions. All known caspases require cleavage adjacent to aspartates to liberate one large and one small subunit, which associate into a $\alpha 2\beta 2$ tetramer to form the active enzyme. To date, approximately 14 caspases have been identified in mammals. Caspases can be divided into three groups based upon structural differences and substrate preferences. These include apoptotic initiators (caspase-2, -8, -9, and -10), apoptotic executioners (caspase-3, -6, and -7), and cytokine processors (caspase-1, -4, -5, -13, murine caspase-11, -12, and -14). Caspase-12 has been cloned from the mouse, and based upon sequence homology to other murine caspases (mCASP) can be divided into a subfamily including mCASP1 and -11. The tissue distribution of mCASP-12 was examined by Northern blot analysis and found to be expressed in most tissues, but was highest in skeletal, muscle, and lung tissue. Caspase-12 has been reported to be activated when the endoplasmic reticulum (ER) undergoes stress, and a participant in ER stress-induced apoptosis pathway. Mice deficient for caspase-12 do not undergo ER stress-induced apoptosis, but their cells are capable of undergoing programmed cell death induced by other stimuli. Murine caspase-12 migrates at ~55 kDa in SDS-PAGE. The antibodies recognize human, mouse, and rat caspase-12. A synthetic peptide corresponding to amino acids 2-17 of murine caspase-12 was used as the immunogen.



Western blot analysis of caspase-12. Lysate from mouse spleen was probed with anti-caspase-12 (Cat. No. 551430) at dilutions of 1:1000 (lane 1), 1:2000 (lane 2), and 1:4000 (lane 3). Caspase-12 is identified as a band of ~55 kDa.

BD Biosciences

 bbbiosciences.com

 United States
 Canada
 Europe
 Japan
 Asia Pacific
 Latin America/Caribbean

 877.232.8995
 888.259.0187
 32.53.720.550
 0120.8555.90
 65.8661.0633
 55.11.5185.9995

 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 carry 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.
 B0, B0 Logo and all other trademarks are the property of Becton, Dickinson and Company, ©2008 BD



Preparation and Storage

The polyclonal antibody was purified from antiserum by negative adsorption and affinity chromatography. Store the antibody at 4°C. Store the positive control lysate (Cat. No. 51-16586N) at -20°C.

Application Notes

Amplication

| Western blot Routinely Tested | |
|-------------------------------|--|

Recommended Assay Procedure:

Applications include western blot analysis (1:1000-1:4000). Mouse spleen control lysate [50 μ g (1 μ g/ml)] is provided as a positive control (Cat. No. 51-16586N; store lysate at -20°C). Additional mouse spleen control lysate (Cat. No. 611462) is sold separately as a ready-to-use western blot control.

Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|-------------------------|--------|--------|
| 554021 | HRP Goat Anti-Rabbit Ig | 1.0 ml | (none) |
| 611462 | Mouse Spleen Lysate | 500 µg | (none) |

Product Notices

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

- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 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.

References

Nakagawa T, Zhu H, Morishima N, et al. Caspase-12 mediates endoplasmic-reticulum-specific apoptosis and cytotoxicity by amyloid-beta. *Nature*. 2000; 403(6765):98-103.(Biology)

Van de Craen M, Vandenabeele P, Declercq W, et al. Characterization of seven murine caspase family members. *FEBS Lett.* 1997; 403(1):61-69.(Biology) Wolf BB, Green DR. Suicidal tendencies: apoptotic cell death by caspase family proteinases. *J Biol Chem.* 1999; 274(29):20049-20052.(Biology) Yoneda T, Imaizumi K, Oono K, et al. Activation of caspase-12, an endoplastic reticulum (ER) resident caspase, through tumor necrosis factor receptor-associated factor 2-dependent mechanism in response to the ER stress. *J Biol Chem.* 2001; 276(17):13935-13940.(Biology)