

**DESCRIPTION**

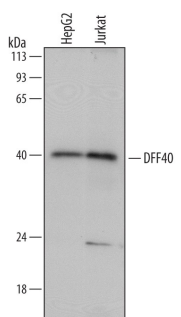
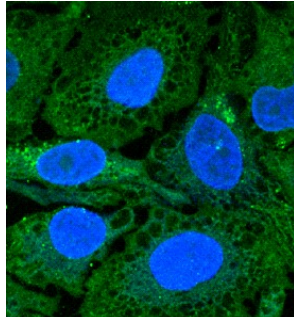
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|---------------------------|---|
| <b>Species Reactivity</b> | Human   |
| <b>Specificity</b>        | Detects human DFF40/CAD in direct ELISAs and Western blots.   |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 609809  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human DFF40/CAD<br>Met1-Gln338<br>Accession # O76075  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                            | <b>Recommended Concentration</b> | <b>Sample</b> |
|----------------------------|----------------------------------|---------------|
| <b>Western Blot</b>        | 0.5 µg/mL                        | See Below     |
| <b>Immunocytochemistry</b> | 8-25 µg/mL                       | See Below     |

**DATA**

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|---|--|
| <p><b>Western Blot</b></p>  <p><b>Detection of Human DFF40/CAD by Western Blot.</b> Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line and Jurkat human acute T cell leukemia cell line. PVDF Membrane was probed with 0.5 µg/mL of Mouse Anti-Human DFF40/CAD Monoclonal Antibody (Catalog # MAB6289) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for DFF40/CAD at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.</p> | <p><b>Immunocytochemistry</b></p>  <p><b>DFF40/CAD in HeLa Human Cell Line.</b> DFF40/CAD was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human DFF40/CAD Monoclonal Antibody (Catalog # MAB6289) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 493-conjugated Anti-Mouse IgG Secondary Antibody (green; Catalog # NL009) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p> |
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**PREPARATION AND STORAGE**

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

**BACKGROUND**

DNA fragmentation factor 40 kDa subunit (DFF40), also known as CAD, is a member of the CIDE domain-containing proteins. It is an apoptotic nuclease that is maintained in an inactive state by association with DFF45. Apoptotic signaling induces DFF45 cleavage and the release of DFF40. Active DFF40 exists as an oligomer and generates double stranded breaks in dsDNA. Alternate splicing of human DFF40 generates isoforms with substitutions and truncations either directly following the CIDE domain (which is aa 4-80) or at the C-terminus. Full length human DFF40 (aa 1-338) shares 76% and 74% aa sequence identity with mouse and rat DFF40, respectively.