

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human and mouse BRCA1 C-Terminus.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 440621
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human BRCA1 C-Terminus Arg1634-Tyr1863 Accession # P38398
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

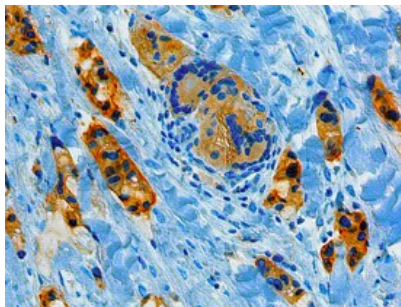
## APPLICATIONS

**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.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below

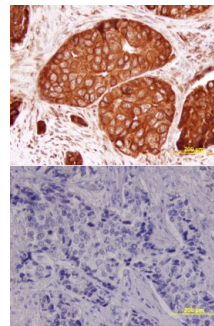
## DATA

### Immunohistochemistry



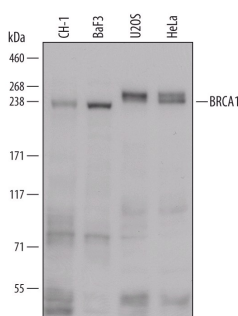
**BRCA1 in Human Breast Cancer Tissue.** BRCA1 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Human BRCA1 Monoclonal Antibody (Catalog # MAB22101) at 5 µg/mL overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Immunohistochemistry



**BRCA1 in Human Breast.** BRCA1 was detected in immersion fixed paraffin-embedded sections of human breast array using Human BRCA1 Monoclonal Antibody (Catalog # MAB22101) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Western Blot



**Detection of Human/Mouse BRCA1 by Western Blot.** Western blot shows lysates of CH-1 mouse B cell lymphoma cell line, BaF3 mouse pro-B cell line, U2OS human osteosarcoma cell line and HeLa human cervical epithelial carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Human BRCA1 Monoclonal Antibody (Catalog # MAB22101) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for BRCA1 at approximately 240 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

## 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.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

The BRCA1 (BR<sup>e</sup>ast CA<sup>n</sup>cer gene 1) tumor suppressor protein has many reported functions. In addition to mediating signal transduction in DNA damage and repair responses, BRCA1 forms a heterodimer with BARD1 and regulates transcriptional activity, assisting in the preservation of chromosomal stability. BRCA1 is one of the first proteins recruited to sites of DNA double-strand breaks and serves as part of a scaffold for assembling other DNA damage response or repair factors, including MSH2, MLH1, ATM and PMS2.