

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Cytokeratin 19 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 963420
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Cytokeratin 19 Gln311-Lys370 Accession # P08727
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

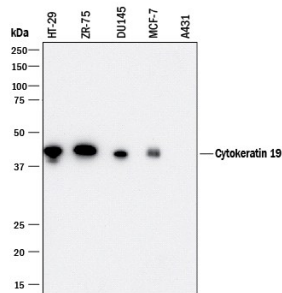
## APPLICATIONS

**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>	0.25 µg/mL	See Below
<b>Immunocytochemistry</b>	5-25 µg/mL	See Below
<b>Immunohistochemistry</b>	5-25 µg/mL	See Below

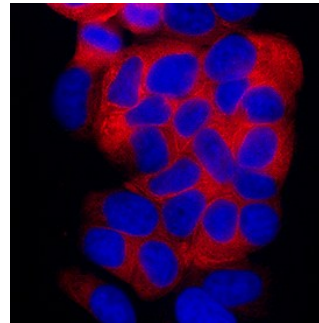
## DATA

### Western Blot



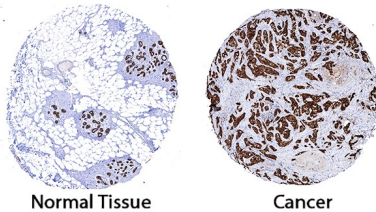
**Detection of Human Cytokeratin 19 by Western Blot.** Western blot shows lysates of HT-29 human colon adenocarcinoma cell line, ZR-75 human breast cancer cell line, DU145 human prostate carcinoma cell line, MCF-7 human breast cancer cell line, and A431 human epithelial carcinoma cell line. PVDF membrane was probed with 0.25 µg/mL of Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35061) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Cytokeratin 19 at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunocytochemistry



**Cytokeratin 19 in MCF-7 Human Cell Line.** Cytokeratin 19 was detected in immersion fixed MCF-7 human breast cancer cell line using Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35061) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Immunohistochemistry



**Cytokeratin 19 in Human Breast Cancer Tissue.** Cytokeratin 19 was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35061) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

## 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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<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

Cytokeratin 19 (Keratin, type I cytoskeletal 19; also KRT-19, CK19 and Keratin-19) is a 40-45 kDa, acidic Class I keratin member of the intermediate filament family of proteins. Individual keratins are always expressed in tandem with a second keratin, and these are found in all epithelial cells. The class I KRT-19 heterodimerizes/polymerizes with 50-52 kDa class II KRT-8 (plus KRT-5 and -7) to form 8-10 nm filaments in epidermal stem cells, secretory gland (sweat; mammary; bile duct) simple epithelium, and neuroendocrine epidermal Merkel cells. It may represent a viable marker for skin stem cells. In skin, Cytokeratin 19 forms filaments in the fetal epithelium, and then progressively decreases with age, being virtually absent by age 17. Human Cytokeratin 19 is 400 amino acids (aa) in length. It contains an N-terminal "head" region (aa 1-79) and a subsequent "rod" region (aa 80-387), but is absent a typical C-terminal tail region. Cytokeratin 19 possesses at least 5 utilized phosphorylation sites plus one acetylated Lys residue. Based on other keratins, and the presence of an Asp at position 238, there may be caspase cleavage-generated isoforms. Full length human Cytokeratin 19 (aa 2-400) shares 82% aa sequence identity with mouse Cytokeratin 19.