Human Cytokeratin 19 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1042608

Catalog Number: MAB35063

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cytokeratin 19 in direct ELISAs
Source	Monoclonal Mouse IgG_{2B} Clone # 1042608
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived human Cytokeratin 19 Gln311-Lys370 Accession # P08727
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

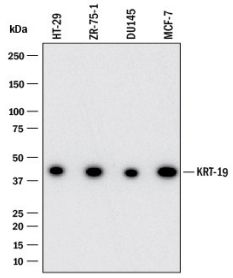
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	HT-29 human colon adenocarcinoma cell line, ZR-75-1 human breast cancer cell line, DU145 human prostate carcinoma cell line, and MCF-7 human breast cancer cell line
Immunocytochemistry	8-25 µg/mL	Immersion fixed RT-4 human urinary bladder transitional cell papilloma cell line and MCF-7 human breast cancer cell line
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of human prostate
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	MCF-7 breast carcinoma cell line fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

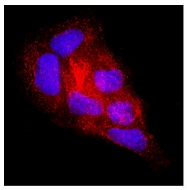
DATA

Western Blot

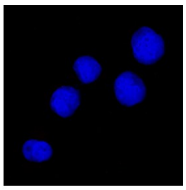


Detection of Cytokeratin 19 by Western Blot. Western blot shows lysates of HT-29 human colon adenocarcinoma cell line, ZR-75-1 human breast cancer cell line, DU145 human prostate carcinoma cell line, and MCF-7 human breast cancer cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35063) 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 Western Blot Buffer Group 1.

Immunocytochemistry



Positive (RT-4 cells)



Negative (THP-1 cells)

Cytokeratin 19 in RT-4 Human Cell Line. Cytokeratin 19 was detected in immersion fixed RT-4 human urinary bladder transitional cell papilloma cell line (positive staining) and THP-1 human acute monocytic leukemia cell line (negative staining) using Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35063) 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. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

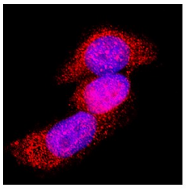
bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human Cytokeratin 19 Antibody

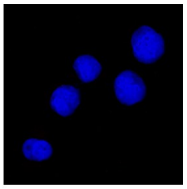
Monoclonal Mouse IgG_{2B} Clone # 1042608

Catalog Number: MAB35063

Immunocytochemistry



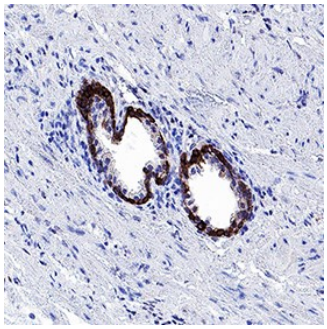
Positive (MCF-7 cells)



Negative (THP-1 cells)

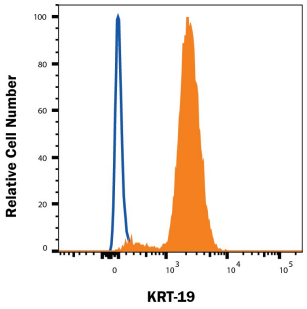
Cytokeratin 19 in MCF-7 Human Cell Line. Cytokeratin 19 was detected in immersion fixed MCF-7 human breast cancer cell line (positive staining) and THP-1 human acute monocytic leukemia cell line (negative staining) using Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35063) at 8 µg/mL 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. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



Cytokeratin 19 in Human prostate. Cytokeratin 19 was detected in immersion fixed paraffin-embedded sections of human prostate using Mouse Anti-Human Cytokeratin 19 Monoclonal Antibody (Catalog # MAB35063) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). 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 DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to prostate glands. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Intracellular Staining by Flow Cytometry



Detection of Cytokeratin-19 in Human MCF-7 cell line by Flow Cytometry. Human MCF-7 breast carcinoma cell line was stained with Mouse Anti-Human Cytokeratin-19 Monoclonal Antibody (Catalog # MAB35063, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by PE-conjugated Anti-Mouse IgG F(ab')2Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). Staining was performed using our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449