Human Cytokeratin 17 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1080235

Catalog Number: MAB11571

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for Cytokeratin 17 around amino acid 120 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1080235
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Cytokeratin 17 containing synthetic peptide Accession # Q04695
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

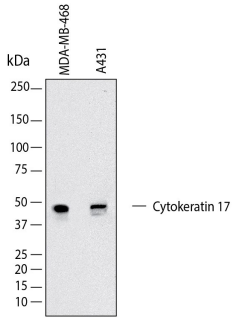
APPLICATIONS

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	2 µg/mL	MDA-MB-468 human breast cancer cell line and A431 human epithelial carcinoma cell line
Immunocytochemistry	3-25 µg/mL	fixed MDA-MB-468 human breast cancer cell line (Positive) and absent in Ramos human Burkitt's lymphoma cell line (Negative)
Immunohistochemistry	3-25 µg/mL	Immersion fixed paraffin-embedded sections of human prostate and of human squamous cell carcinoma
Simple Western	100 µg/mL	MDA-MB-468 human breast cancer cell line

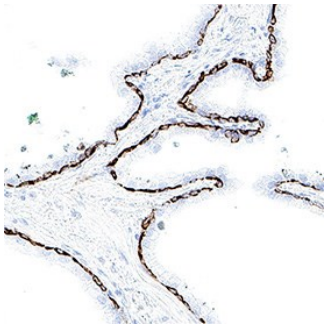
DATA

Western Blot



Detection of Human Cytokeratin 17 by Western Blot. Western Blot shows lysates of MDA-MB-468 human breast cancer cell line and A431 human epithelial carcinoma cell line. PVDF membrane was probed with 2 µg/ml of Mouse Anti-Human Cytokeratin 17 Monoclonal Antibody (Catalog # MAB11571) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Cytokeratin 17 at approximately 53 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

Immunohistochemistry



Detection of Cytokeratin 17 in Human Prostate. Cytokeratin 17 was detected in immersion fixed paraffin-embedded sections of human prostate using Mouse Anti-Human Cytokeratin 17 Monoclonal Antibody (Catalog # MAB11571) at 5 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001) or the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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China | info.cn@bio-techne.com TEL: 400.821.3475

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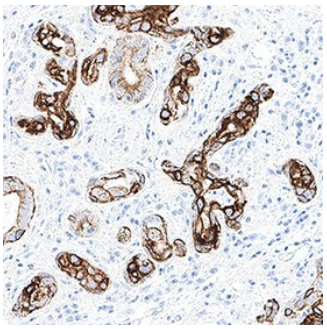
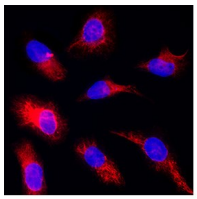
Immunohistochemistry

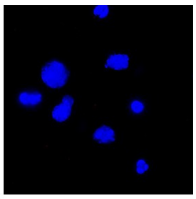


Detection of Cytokeratin 17 in Human Squamous Cell Carcinoma. Cytokeratin 17 was detected in immersion fixed paraffin-embedded sections of human squamous cell carcinoma using Mouse Anti-Human Cytokeratin 17 Monoclonal Antibody (Catalog # MAB11571) at 5 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001) or the HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunocytochemistry



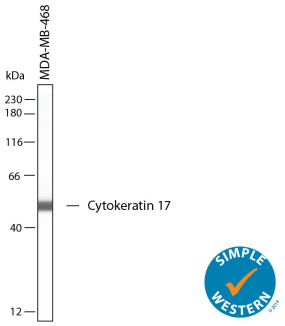
MDA-MB-468 (Positive) cells



Ramos (Negative) cells

Detection of Cytokeratin 17 in MDA-MB-468 cells (Positive) and Ramos cells (Negative). Cytokeratin 17 was detected in fixed MDA-MB-468 human breast cancer cell line (Positive) and absent in Ramos human Burkitt's lymphoma cell line (Negative) using Mouse Anti-Human Cytokeratin 17 Monoclonal Antibody (Catalog # MAB11571) 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 the cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Simple Western



Detection of Human Cytokeratin 17 by Simple Western™. Simple Western shows lysates of MDA-MB-468 human breast cancer cell line, loaded at 0.5 mg/ml. A specific band was detected for Cytokeratin 17 at approximately 53 kDa (as indicated) using 100 µg/mL of Mouse Anti-Human Cytokeratin 17 Monoclonal Antibody (Catalog # MAB11571). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
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.

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BACKGROUND

Cytokeratin 17 (KRT17) is a 48 kDa, 432 aa type I keratin that has been studied in several types of cancer. KRT17 promotes epithelial cell proliferation and tumor growth in skin. Many studies have shown KRT17 overexpression in many cancers including cervical, oral, ovarian, gastric, lung and pancreatic cancer among others. In certain types of breast cancer, KRT17 overexpression has been associated with poor prognosis. KRT17 expression is closely associated with prognosis in cancer and can be a novel therapeutic target.

References:

1. Tang S, Liu W, Yong L, Liu D, Lin X, Huang Y, Wang H, Cai F. Reduced Expression of KRT17 Predicts Poor Prognosis in HER2high Breast Cancer. Biomolecules. 2022 Aug 25;12(9):1183. doi: 10.3390/biom12091183. PMID: 36139022; PMCID: PMC9496156.
2. Hu H, Xu DH, Huang XX, Zhu CC, Xu J, Zhang ZZ, Zhao G. Keratin17 Promotes Tumor Growth and is Associated with Poor Prognosis in Gastric Cancer. J Cancer. 2018 Jan 1;9(2):346-357. doi: 10.7150/jca.19838. PMID: 29344281; PMCID: PMC5771342.
3. Li D, Ni XF, Tang H, Zhang J, Zheng C, Lin J, Wang C, Sun L, Chen B. KRT17 Functions as a Tumor Promoter and Regulates Proliferation, Migration and Invasion in Pancreatic Cancer via mTOR/S6k1 Pathway. Cancer Manag Res. 2020 Mar 19;12:2087-2095. doi: 10.2147/CMAR.S243129. PMID: 32256116; PMCID: PMC7090205.

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