

## DESCRIPTION

|                           |                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                               |
| <b>Specificity</b>        | Detects a synthetic peptide specific for human Cytokeratin 7 around amino acid 460 in Direct ELISA. |
| <b>Source</b>             | Recombinant Monoclonal Rabbit IgG Clone # 3140B                                                     |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                          |
| <b>Immunogen</b>          | Synthetic Peptide<br>Accession # P08729                                                             |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.                                  |

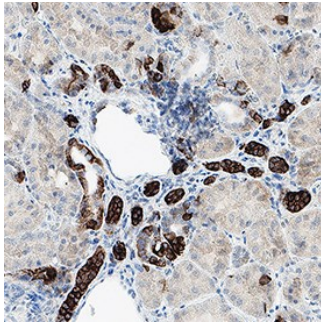
## APPLICATIONS

**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.

|                             | <b>Recommended Concentration</b> | <b>Sample</b>                                                           |
|-----------------------------|----------------------------------|-------------------------------------------------------------------------|
| <b>Western Blot</b>         | 0.5 µg/mL                        | HCT-116 human colorectal carcinoma cell line                            |
| <b>Immunocytochemistry</b>  | 1-10 µg/mL                       | Immersion fixed SK-BR-3 human breast cancer cell line                   |
| <b>Immunohistochemistry</b> | 1-10 µg/mL                       | Immersion fixed paraffin-embedded sections of human kidney and placenta |
| <b>Simple Western</b>       | 10 µg/mL                         | KATO-III human gastric carcinoma cell line                              |

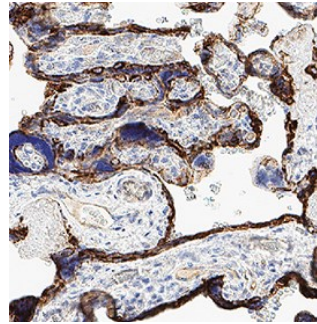
## DATA

### Immunohistochemistry



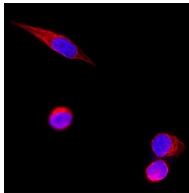
**Detection of Cytokeratin 7 in Human Kidney.** Cytokeratin 7 was detected in immersion fixed paraffin-embedded sections of human kidney using Rabbit Anti-Human Cytokeratin 7 Monoclonal Antibody (Catalog # MAB11701) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). 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 [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

### Immunohistochemistry

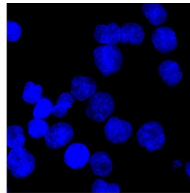


**Detection of Cytokeratin 7 in Human Placenta.** Cytokeratin 7 was detected in immersion fixed paraffin-embedded sections of human placenta using Rabbit Anti-Human Cytokeratin 7 Monoclonal Antibody (Catalog # MAB11701) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003) or the HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). 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 [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

### Immunocytochemistry



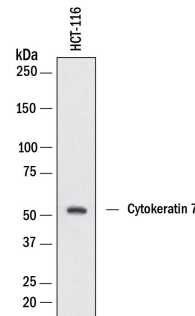
Positive (SK-BR-3 cells)



Negative (K562 cells)

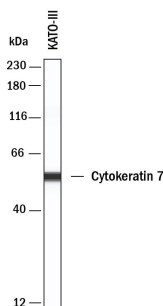
**Detection of Cytokeratin 7 in SK-BR-3 cells.** Cytokeratin 7 was detected in immersion fixed SK-BR-3 human breast cancer cell line (Positive) and absent in K562 human chronic myelogenous leukemia cell line (Negative) using Rabbit Anti-Human Cytokeratin 7 Monoclonal Antibody (Catalog # MAB11701) at 3 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to the cytoskeleton. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Western Blot



**Detection of Human Cytokeratin 7 by Western Blot.** Western Blot shows lysates of HCT-116 human colorectal carcinoma cell line. PVDF membrane was probed with 0.5 µg/ml of Rabbit Anti-Human Cytokeratin 7 Monoclonal Antibody (Catalog # MAB11701) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for Cytokeratin 7 at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using [Western Blot Buffer Group 1](#).

### Simple Western



**Detection of Human Cytokeratin 7 by Simple Western™.** Simple Western lane view shows lysates of KATO-III human gastric carcinoma cell line, loaded at 0.1 mg/ml. A specific band was detected for Cytokeratin 7 at approximately 56 kDa (as indicated) using 10 µg/ml of Rabbit Anti-Human Cytokeratin 7 Monoclonal Antibody (Catalog # MAB11701) followed by HRP-conjugated Goat Anti-Rabbit Secondary Antibody (Catalog # 042-206). This experiment was conducted under reducing conditions and using the 12-230kDa separation system.



## PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Reconstitute lyophilized material at 0.2 mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.                                                                                                                                                                                                                                             |
| <b>Shipping</b>                | 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.                                                                                                                                                                          |
| <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 7 is a 51 kDa type II keratin and a member of the keratin gene family. Cytokeratin 7 is specifically expressed in the simple epithelia lining the cavities of the internal organs and in the gland ducts and blood vesicles. It is found in simple glandular epithelia and in transitional epithelium. Combined with cytokeratin-20, cytokeratin-7 is often used for assessing the origin of metastatic cancer.

### References:

1. Schweizer J, Bowden PE, Coulombe PA, Langbein L, Lane EB, Magin TM, Maltais L, Omary MB, Parry DA, Rogers MA, Wright MW. New consensus nomenclature for mammalian keratins. J Cell Biol. 2006 Jul 17;174(2):169-74. doi: 10.1083/jcb.200603161. Epub 2006 Jul 10. PMID: 16831889; PMCID: PMC2064177.
2. Dum D, Menz A, Völkel C, De Wispelaere N, Hinsch A, Gorbokon N, Lennartz M, Luebke AM, Hube-Magg C, Kluth M, Fraune C, Möller K, Bernreuther C, Lebok P, Clauditz TS, Jacobsen F, Sauter G, Uhlig R, Wilczak W, Steurer S, Minner S, Marx AH, Simon R, Burandt E, Krech T. Cytokeratin 7 and cytokeratin 20 expression in cancer: A tissue microarray study on 15,424 cancers. Exp Mol Pathol. 2022 Jun;126:104762. doi: 10.1016/j.yexmp.2022.104762. Epub 2022 Apr 4. PMID: 35390310.