

Anti-Cytokeratin 19 KRT19 Antibody Picoband™ (monoclonal, 3D4)

Catalog Number: M02101-2

About KRT19

Keratin, type I cytoskeletal 19 is a protein that in humans is encoded by the KRT19 gene. The protein encoded by this gene is a member of the keratin family. It is specifically expressed in the periderm, the transiently superficial layer that envelops the developing epidermis. The type I cytokeratins are clustered in a region of chromosome 17q12-q21. Due to its high sensitivity, KRT19 is the most used marker for the RT-PCR-mediated detection of tumor cells disseminated in lymph nodes, peripheral blood, and bone marrow of breast cancer patients. Keratin 19 is often used together with keratin 8 and keratin 18 to differentiate cells of epithelial origin from hematopoietic cells in tests that enumerate circulating tumor cells in blood.

Overview

Product Name	Anti-Cytokeratin 19 KRT19 Antibody Picoband™ (monoclonal, 3D4)
Reactive Species	Human
Description	Boster Bio Anti-Cytokeratin 19 KRT19 Antibody Picoband™ (monoclonal, 3D4) catalog # M02101-2. Tested in IF, IHC, WB applications. This antibody reacts with Human.
Application	IF, IHC, WB
Clonality	Monoclonal 3D4
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P08727

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Cytokeratin 19, different from the related mouse and rat sequences by nine amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunofluorescence, 2ug/ml

Anti-Cytokeratin 19 KRT19 Antibody Picoband™ (monoclonal, 3D4) (M02101-2) Images

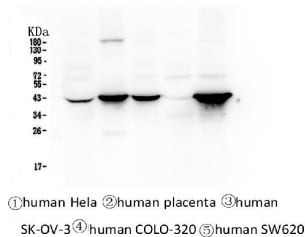


Figure 1. Western blot analysis of Cytokeratin 19 using anti-Cytokeratin 19 antibody (M02101-2).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,

Lane 2: human placenta tissue lysates,

Lane 3: human SK-OV-3 whole cell lysates,

Lane 4: human COLO-320 whole cell lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Cytokeratin 19 antigen affinity purified monoclonal antibody (Catalog # M02101-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system.

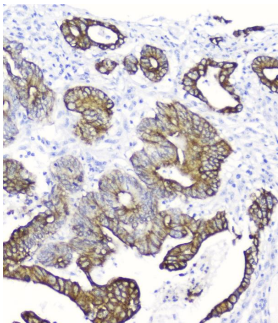


Figure 2. IHC analysis of Cytokeratin 19 using anti-Cytokeratin 19 antibody (M02101-2).

Cytokeratin 19 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-Cytokeratin 19 Antibody (M02101-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

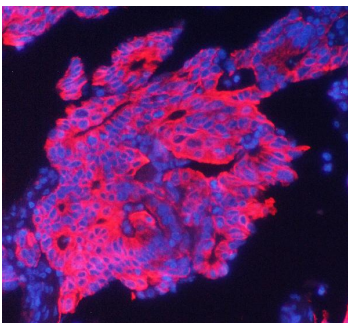


Figure 3. IF analysis of Cytokeratin 19 using anti-Cytokeratin 19 antibody (M02101-2).

Cytokeratin 19 was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL mouse anti-Cytokeratin 19 Antibody (M02101-2) overnight at 4°C. DyLight®550 Conjugated Goat Anti-Mouse IgG was used as secondary antibody at 1:200 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

1. PubMed ID: 29494688, Wang W, Said A, Wang B, Qu G, Xu Q, Liu B, Shen Z. PLoS One. 2018 Mar 1;13(3):e0193876. doi: 10.1371/journal.pone.0193876. eCollection 2018. Establishment and evaluation of the goose embryo epithelial (GEE) cell line as a new model for propagation...
2. PubMed ID: 28656299, Quan, J., Du, Q., Hou, Y., Wang, Z., & Zhang, J. (2017). Utilization of E-cadherin by monocytes from tumour cells plays key roles in the progression of bone invasion by oral squamous cell carcinoma. Oncology Reports, 38(2), 850-858. Advance online...
3. PubMed ID: 24963492, Li M, Zhang B, Zhang Z, Liu X, Qi X, Zhao J, Jiang Y, Zhai H, Ji Y, Luo D. Biomed Res Int. 2014;2014:981261. Doi: 10.1155/2014/981261. Epub 2014 May 22. Stem Cell-Like Circulating Tumor Cells Indicate Poor Prognosis In Gastric Cancer.

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