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# Anti-Cytokeratin 18 Krt18 Rabbit Monoclonal Antibody

Catalog # ABO14193

## Product Information

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|---|---|
| **Application** | WB, IHC, IF, ICC, FC |
| **Primary Accession** | P05783 |
| **Host** | Rabbit |
| **Isotype** | Rabbit IgG |
| **Reactivity** | Rat, Human, Mouse |
| **Clonality** | Monoclonal |
| **Format** | Liquid |
| **Description** | Anti-Cytokeratin 18 Krt18 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. |

## Additional Information

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| **Gene ID** | 3875 |
| **Other Names** | Keratin, type I cytoskeletal 18, Cell proliferation-inducing gene 46 protein, Cytokeratin-18, CK-18, Keratin-18, K18, KRT18, CYK18 |
| **Calculated MW** | 48058 |
| **Application Details** | WB 1:500-1:2000<br>IHC 1:100-1:500<br>ICC/IF 1:50-1:200<br>FC 1:60 |
| **Subcellular Localization** | Nucleus matrix. Nucleus, nucleolus. Cytoplasm. |
| **Tissue Specificity** | Expressed in endoderm, intestinal epithelial cells and in most extraembryonic tissues.. |
| **Source** | Eukaryota |
| **Contents** | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA. |
| **Clone Names** | Clone: GBF-11 |
| **Immunogen** | A synthesized peptide derived from human Cytokeratin 18 |
| **Purification** | Affinity-chromatography |
| **Storage** | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles. |

## Protein Information

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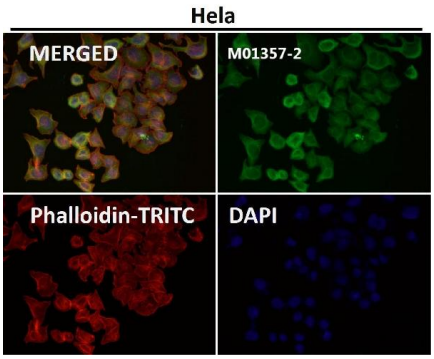
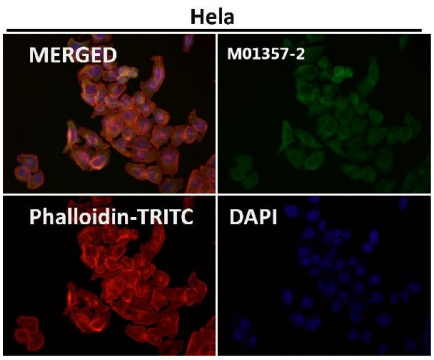
| **Name** | KRT18 ( HGNC:6430) |
| **Synonyms** | CYK18 |
| **Function** | Structural component of intermediate filaments in simple epithelial cells. Forms intermediate filaments by heterodimerizing with the type II keratin KRT8, providing mechanical stability and resilience to epithelial cells (PubMed:15529338, PubMed:26823019). Involved in ARHGEF40-mediated actin stress fiber formation and tensional force- induced stress fiber formation and reinforcement (PubMed:26823019). Integrates into the intermediate filament network of skeletal muscle fibers alongside desmin and KRT19, contributing to force transmission (By similarity). Organization and orientation of KRT8/KRT18 filaments are responsible for the properly elongated morphology of epithelial tubules (By similarity). Also acts downstream of ROCK kinase activation as part of a positive feedback mechanism in response to cellular mechanical stress loading (PubMed:26823019). Involved in the uptake of thrombin-antithrombin complexes by hepatic cells (By similarity). When phosphorylated, plays a role in filament reorganization (PubMed:7523419, PubMed:8522591, PubMed:9298992, PubMed:9524113). Involved in the delivery of mutated CFTR to the plasma membrane (PubMed:15529338, PubMed:16424149). Involved in interleukin-6 (IL-6)- mediated barrier protection (PubMed:17213200). |
| **Cellular Location** | Nucleus matrix {ECO:0000250\|UniProtKB:Q5BJY9}. Cytoplasm, perinuclear region. Nucleus, nucleolus. Cytoplasm {ECO:0000250\|UniProtKB:Q5BJY9} |
| **Tissue Location** | Expressed in colon, placenta, liver and very weakly in exocervix. Increased expression observed in lymph nodes of breast carcinoma. |

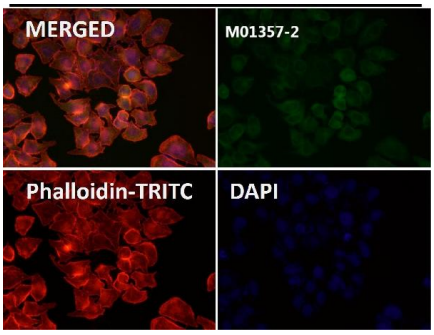
## Images



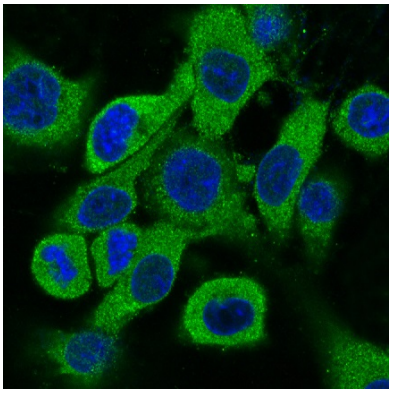

Immunofluorescent analysis using the Antibody at 1:50 dilution.




Immunofluorescent analysis using the Antibody at 1:150 dilution.




Immunofluorescent analysis using the Antibody at 1:500 dilution.



Immunofluorescent analysis of pc-12 cells, using Cytokeratin 18 Antibody.

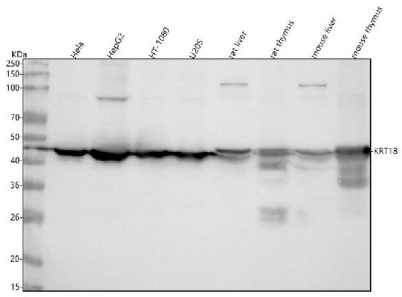



Figure 1. Western blot analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human HT-1080 whole cell lysates,
Lane 4: human U2OS whole cell lysates,
Lane 5: rat liver tissue lysates,
Lane 6: rat thymus tissue lysates,
Lane 7: mouse liver tissue lysates,
Lane 8: mouse thymus tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Cytokeratin 18 antigen affinity purified monoclonal antibody (Catalog # M01357-2) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Cytokeratin 18 at approximately 48 kDa. The expected band size for Cytokeratin 18 is at 48 kDa.

Figure 2. IHC analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2).
Cytokeratin 18 was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated



with 1:100 rabbit anti-Cytokeratin 18 Antibody (M01357-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

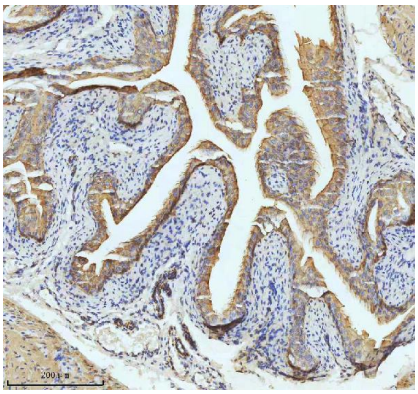


Figure 3. IHC analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2). Cytokeratin 18 was detected in a paraffin-embedded section of mouse bladder tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:100 rabbit anti-Cytokeratin 18 Antibody (M01357-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

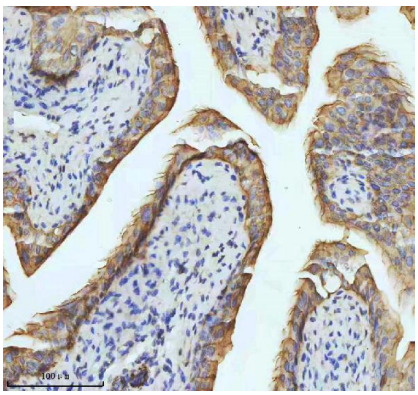


Figure 4. IHC analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2). Cytokeratin 18 was detected in a paraffin-embedded section of mouse bladder tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:100 rabbit anti-Cytokeratin 18 Antibody (M01357-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

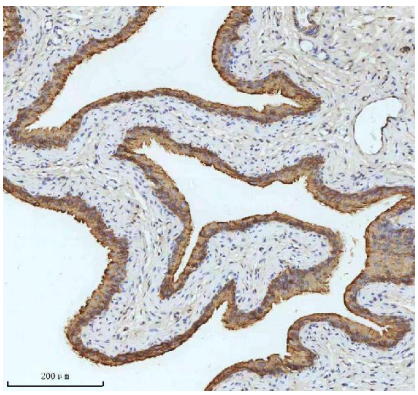
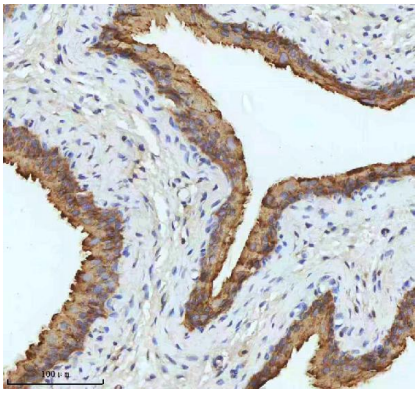


Figure 5. IHC analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2). Cytokeratin 18 was detected in a paraffin-embedded section of rat bladder tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:100 rabbit anti-Cytokeratin 18 Antibody (M01357-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 6. IHC analysis of Cytokeratin 18 using anti-Cytokeratin 18 antibody (M01357-2). Cytokeratin 18 was detected in a paraffin-embedded section of rat bladder tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope



retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:100 rabbit anti-Cytokeratin 18 Antibody (M01357-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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