Human KRT5 antibody

Catalog Number: ATGA0368

PRODUCT INFORMATION

Catalog number
ATGA0368

Clone No.
AT12C4

Product type
Monoclonal Antibody

UnitProt No.
P13647

NCBI Accession No.
NP_000415

Alternative Names
Keratin 5, CK5, DDD, K5, KRT5A

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human KRT5 (1-590aa) purified from E. coli

Isotype
IgG2a kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA,WB,ICC/IF,IHC,FACS

Usage
The antibody has been tested by ELISA, Western blot, ICC/IF, FACS and IHC analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

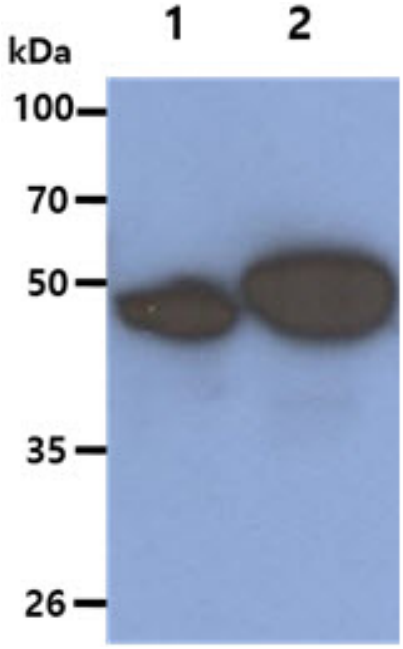
Keratin 5, also known as KRT5, K5, or CK5, dimerizes with keratin 14 and forms the intermediate filaments (IF) that make up the cytoskeleton of basal epithelial cells. This protein is involved in several diseases including epidermolysis bullosa simplex and breast and lung cancers. Keratin 5 (and K14) are expressed primarily in basal keratinocytes in the epidermis, specifically in the stratified epithelium lining the skin and digestive tract. Keratin intermediate filaments make up the cytoskeletal scaffold within epithelial cells, which contributes to the cell architecture and provides the cells with the ability to withstand mechanical, and non-mechanical, stresses. K5/K14 keratin pairs are able to undergo extensive bundling due to the non-helical tail of K15 acting as a weak cross-linker at the intermediate filament surface. This bundling increase the elasticity, and therefore the mechanical resilience, of the intermediate filaments.

General References

Lersch R., et al. (1988) Molecular and Cellular Biology. 8(1): 486-493.
Eckert RL., et al. (1988) Dna. 7(5): 337-345.
Atkinson SD., et al. (2011) J Invest Dermatol. 131(10): 2079-2086.
van de Rijn M., et al. (2002) Am J Pathol. 161(6): 1991-1996.

DATA

Western blot analysis (WB)



The Cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human KRT5 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1. : HeLa cell lysate
Lane 2. : A431 cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)

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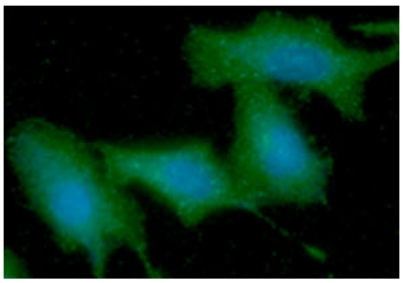
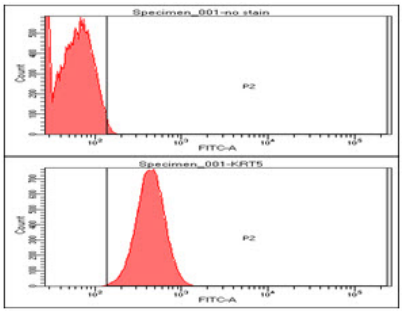


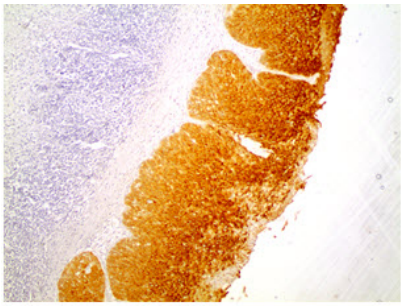
ICC/IF analysis of KRT5 in A549 cells. The cell was stained with ATGA0368 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

Flow cytometry (FACS)



Flow cytometry analysis of KRT5 in HeLa cells. The cell was stained with ATGA0368 at 2-5ug for 1x10^6cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).

Immunohistochemistry (IHC)



Human cervical cancer tissue

Paraffin embedded sections of human cervical cancer tissue were incubated with anti-human KRT5 (1:200) for 2 hours at room temperature. Antigen retrieval was performed in 0.1M sodium citrate buffer and detected using Diaminobenzidine (DAB)