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Cytokeratin 5 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1115a

Product Information

Application	WB, IHC, E
Primary Accession	P13647
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3E2F1
Isotype	IgG1
Calculated MW	62378
Description	CK5 (keratin 5) is a member of the keratin gene family. Biochemically, most members of the CK family fall into one of two classes, type I (acidic polypeptides) and type II (basic polypeptides). The type II cytokeratins consist of basic or neutral proteins which are arranged in pairs of heterotypic keratin chains coexpressed during differentiation of simple and stratified epithelial tissues. This type II cytokeratin is specifically expressed in the basal layer of the epidermis with family member KRT14. The type II cytokeratins are clustered in a region of chromosome 12q12-q13. At least one member of the acidic family and one member of the basic family is expressed in all epithelial cells. Cytokeratin 5 is expressed in normal basal cells. Mutations of the Cytokeratin5 gene (KRT5) have been shown to result in the autosomal dominant disorderepidermolysis bullosa (EB). Defects in KRT5 are a cause of epidermolysis bullosa simplex.
Immunogen	Purified recombinant fragment of CK5 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3852
Other Names	Keratin, type II cytoskeletal 5, 58 kDa cytokeratin, Cytokeratin-5, CK-5, Keratin-5, K5, Type-II keratin Kb5, KRT5
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Cytokeratin 5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KRT5 (HGNC:6442)
Function	Structural component of intermediate filaments in basal keratinocytes of stratified epithelia. Forms heteropolymers with type I partners including KRT14 and KRT15, contributing to the formation of the keratin intermediate filament network that provides mechanical stability and resilience to the basal layer of the epidermis (PubMed:1372711, PubMed:1694855). Regulates the recruitment of Langerhans cells to the epidermis, potentially by modulation of the abundance of macrophage chemotactic cytokines, macrophage inflammatory cytokines and CTNND1 localization in keratinocytes (By similarity).
Cellular Location	Cytoplasm.
Tissue Location	Expressed in corneal epithelium (at protein level) (PubMed:26758872). Expressed in keratinocytes (at protein level) (PubMed:20128788, PubMed:31302245).

References

1. Canedo-Patzi AM. Leon-Bojorge B. de Ortiz-Hidalgo C. Gac Med Mex. 2006, Jan-Feb, 142(1):59-66. Spanish.
2. Leibl S. Moinfar F. Am J Surg Pathol. 2006, Apr, 30(4):450-6.

Images

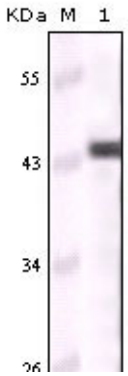


Figure 1: Western blot analysis using CK5 mouse mAb against truncated CK5 recombinant protein

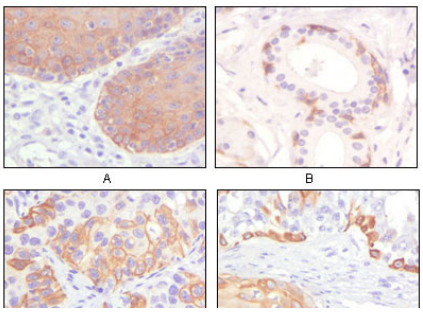


Figure 2: Immunohistochemical analysis of paraffin-embedded human esophagus epithelium (A), salivary gland basal cell (B), lung squamous cell carcinoma (C), endometrium admosquamous carcinoma (D), showing cytoplasmic and membrane localization using CK5 mouse mAb with DAB staining.

Figure 3: Immunohistochemical analysis of paraffin-embedded human skin tissues using CK5 mouse mAb.



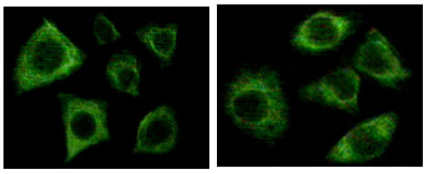


Figure 3: Immunofluorescence staining of methanol-fixed Eca-109(left) and HepG2(right) cells showing cytoplasmic localization.

Citations

- Iterative Three-Dimensional Epidermis Bioengineering and Xenografting to Assess Long-Term Regenerative Potential in Human Keratinocyte Precursor Cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.