10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KRT15 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1335a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P19012
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6E7
Isotype	IgG2a
Calculated MW	49212
Description	The protein encoded by this gene is a member of the keratin gene family. The keratins are intermediate filament proteins responsible for the structural integrity of epithelial cells and are subdivided into cytokeratins and hair keratins. Keratin 15 is a type I keratin without a defined type II partner. Keratin 15 is expressed primarily in the basal keratinocytes of stratified tissues, including the fetal epidermis and fetal nail. Expression of keratin 15 is downregulated in some hyperproliferating situations, such as psoriasis and hypertrophic scars. Because keratinocytes in psoriasis and hypertrophic scars are activated, it is suggested that keratin 15 expression is not compatible with keratinocyte activation and the keratin 15 gene is downregulated to maintain the activated phenotype.
Immunogen	Purified recombinant fragment of KRT15 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3866
Other Names	Keratin, type I cytoskeletal 15, Cytokeratin-15, CK-15, Keratin-15, K15, KRT15, KRTB
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A 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	KRT15 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KRT15 (HGNC:6421)
Synonyms	KRTB
Function	Structural component of intermediate filaments in the epithelium. Forms heteropolymers with type II keratin KRT5, assembling into keratin intermediate filament network that promotes mechanical resilience of undifferentiated cells, including hair follicle bulge cells, foregut basal progenitors and intestinal crypt cells. Displays an antagonist role with KRT14 in basal epithelial cells, where KRT14 promotes cell differentiation while KRT15 maintains the progenitor state and promotes proliferation and clonogenicity (PubMed:41511042). Promotes the progenitor state in basal keratinocytes by maintaining cytoplasmic YAP1 less effectively than KRT14 due to missing biochemical motifs, thereby allowing higher YAP1 nuclear activity (PubMed:41511042). Also contributes to epithelial cell regeneration after injury. In the absence of KRT14, forms a bona fide, but ultrastructurally distinct keratin filament network with KRT5 (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:Q61414}.
Tissue Location	Expressed in a discontinuous manner in the basal cell layer of adult skin epidermis, but continuously in the basal layer of fetal skin epidermis and nail. Also expressed in the outer root sheath above the hair bulb in hair follicle (at protein level) Expressed homogeneously in all cell layers of the esophagus and exocervix, but detected in the basal cell layer only of oral mucosa, skin and in the basal plus the next two layers of the suprabasal epithelium of the palate. Expressed in basal cells on the airway surface and in the gland ducts in pulmonary bronchus (PubMed:36512409)

References

1. J Invest Dermatol. 1999. 112(3):362-9 2. Exp Cell Res. 2006. 254(1):80-90 3. Mol Cell Biol. 2000. 24(8):3168-79

Images

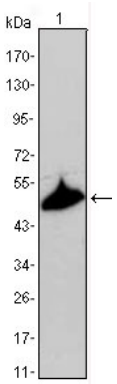
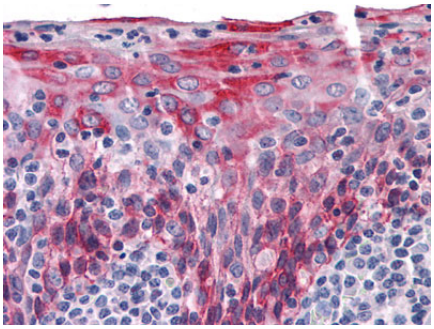


Figure 1: Western blot analysis using KRT15 mouse mAb against A431 cell lysate.

Figure 2: Immunohistochemical analysis of paraffin-embedded human Tonsil tissues using KRT15 mouse mAb



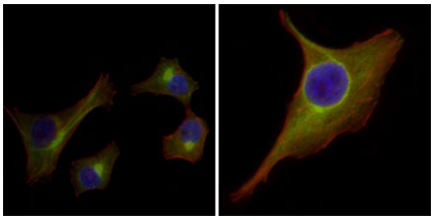


Figure 3: Immunofluorescence analysis of HepG2(left) and PACN-1 (right) cells using KRT15 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

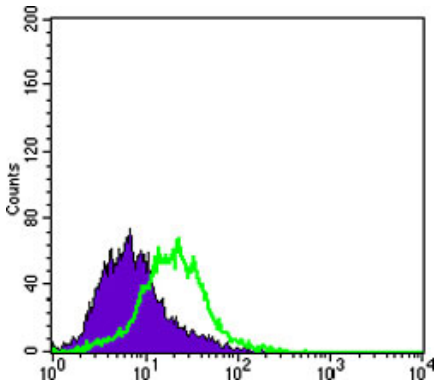


Figure 4: Flow cytometric analysis of PACN-1 cells using KRT15 mouse mAb (green) and negative control (purple).

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