

Cytokeratin 10 (LH2): sc-53252

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. Cytokeratins 10 and 13 are present in the cytoskeletal region of a subset of squamous cell carcinomas. Cytokeratin 10 is a heterotetramer of two type I and two type II keratins, is generally associated with keratin 1, and is seen in all suprabasal cell layers including stratum corneum.

CHROMOSOMAL LOCATION

Genetic locus: KRT10 (human) mapping to 17q21.2; Krt10 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 10 (LH2) is a mouse monoclonal antibody raised against psoriasis patient skin extract of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 10 (LH2) is available conjugated to agarose (sc-53252 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53252 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53252 PE), fluorescein (sc-53252 FITC), Alexa Fluor® 488 (sc-53252 AF488), Alexa Fluor® 546 (sc-53252 AF546), Alexa Fluor® 594 (sc-53252 AF594) or Alexa Fluor® 647 (sc-53252 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53252 AF680) or Alexa Fluor® 790 (sc-53252 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Cytokeratin 10 (LH2) is recommended for detection of Cytokeratin 10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cytokeratin 10 siRNA (h): sc-35149, Cytokeratin 10 siRNA (m): sc-35150, Cytokeratin 10 shRNA Plasmid (h): sc-35149-SH, Cytokeratin 10 shRNA Plasmid (m): sc-35150-SH, Cytokeratin 10 shRNA (h) Lentiviral Particles: sc-35149-V and Cytokeratin 10 shRNA (m) Lentiviral Particles: sc-35150-V.

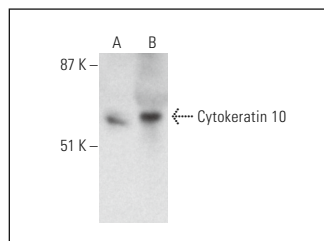
Molecular Weight of Cytokeratin 10: 57 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

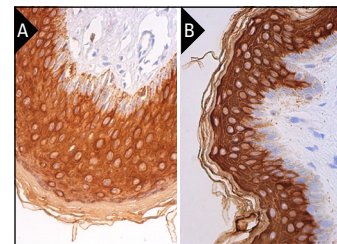
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Cytokeratin 10 (LH2): sc-53252. Western blot analysis of Cytokeratin 10 expression in HeLa whole cell lysate (A) and human skin tissue extract (B).



Cytokeratin 10 (LH2): sc-53252. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing cytoplasmic staining of epidermal cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes and Langerhans cells (B).

SELECT PRODUCT CITATIONS

1. Burger, B., et al. 2012. Description of the natural course and clinical manifestations of ichthyosis with confetti caused by a novel KRT10 mutation. *Br. J. Dermatol.* 166: 434-439.
2. Boyden, L.M., et al. 2016. Dominant *de novo* DSP mutations cause erythrokeratoderma-cardiomyopathy syndrome. *Hum. Mol. Genet.* 25: 348-357.
3. Boyden, L.M., et al. 2017. Mutations in KDSR cause recessive progressive symmetric erythrokeratoderma. *Am. J. Hum. Genet.* 100: 978-984.
4. Nomura, T., et al. 2018. Chromosomal inversions as a hidden disease-modifying factor for somatic recombination phenotypes. *JCI Insight* 3: e97595.
5. Fu, R., et al. 2019. Rebamipide ophthalmic solution modulates the ratio of T helper cell 17/regulatory T cells in dry eye disease mice. *Mol. Med. Rep.* 19: 4011-4018.
6. Gao, L., et al. 2020. Ozone therapy promotes the differentiation of basal keratinocytes via increasing Tp63-mediated transcription of KRT10 to improve psoriasis. *J. Cell. Mol. Med.* 24: 4819-4829.
7. Peters, F., et al. 2021. Syndecan-1 shedding by meprin β impairs keratinocyte adhesion and differentiation in hyperkeratosis. *Matrix Biol.* 102: 37-69.
8. Mo, R., et al. 2022. Nonsense mutations in KRT1 caused recessive epidermolytic palmoplantar keratoderma with knuckle pads. *J. Eur. Acad. Dermatol. Venereol.* 36: 1857-1862.
9. Sahle, M., et al. 2024. A Fibrin-based human multicellular gingival 3D model provides biomimicry and enables long-term *in vitro* studies. *Macromol. Biosci.* 24: e2300162.

RESEARCH USE

For research use only, not for use in diagnostic procedures.