Cytokeratin 14 (LL001): sc-53253

BACKGROUND
Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed in pairs in both keratinized and non-keratinized epithelial tissue, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The α-helical coiled-coil dimers associate laterally end-to-end to form 10-nm diameter filaments. Cytokeratins are useful markers of tissue differentiation, and in addition they aid in the characterization of malignant tumors. In Bowen’s disease, the characteristic malignancy of the epidermis exhibits distinct expression patterns of Cytokeratin 14. The gene encoding human Cytokeratin 14 maps to chromosome 17q21.2. Mutations in this gene lead to epidermolysis bullosa simplex, an inherited skin disorder characterized by skin blistering due to basal keratinocyte fragility.

CHROMOSOMAL LOCATION
Genetic locus: KRT14 (human) mapping to 17q21.2; Krt14 (mouse) mapping to 11 D.

SOURCE
Cytokeratin 14 (LL001) is a mouse monoclonal antibody raised against the C-terminus of Cytokeratin 14 of human origin.

PRODUCT
Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Cytokeratin 14 (LL001) is available conjugated to agarose (sc-53253 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-52533 HRP), 200 µg/ml, for WB, IHC and ELISA; to either phycoerythrin (sc-53253 PE), fluorescein (sc-52535 FITC), Alexa Fluor® 488 (sc-5253 AF488), Alexa Fluor® 546 (sc-52535 AF546), Alexa Fluor® 594 (sc-5253 AF594) or Alexa Fluor® 647 (sc-5253 AF647), 200 µg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 680 (sc-5253 AF680) or Alexa Fluor® 790 (sc-5253 AF790), 200 µg/ml, for Near-Infrared (NIR) IF, WB and FCM.

APPLICATIONS
Cytokeratin 14 (LL001) is recommended for detection of Cytokeratin 14 of mouse, rat, human and porcine 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 14 siRNA (h): sc-43309; Cytokeratin 14 siRNA (m): sc-43310, Cytokeratin 14 shRNA Plasmid (h); sc-43309-SH, Cytokeratin 14 shRNA Plasmid (m); sc-43310-SH, Cytokeratin 14 shRNA (h) Lentiviral Particles: sc-43309-V and Cytokeratin 14 shRNA (m) Lentiviral Particles: sc-43310-V.

Molecular Weight of Cytokeratin 14: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 804G whole cell lysate or A-431 whole cell lysate: sc-2201.

SELECT PRODUCT CITATIONS

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

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