

pan-Cytokeratin (AE13): sc-57012

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. For example, Cytokeratins 10 and 13 are expressed highly in a subset of squamous cell carcinomas while Cytokeratin 18 is expressed in a majority of adenocarcinomas and basal cell carcinomas.

REFERENCES

- Gatter, K.C., et al. 1985. Human lung tumours: a correlation of antigenic profile with histological type. *Histopathology* 9: 805-823.
- Pulford, K.A., et al. 1985. The characterization of two monoclonal anti-keratin antibodies and their use in the study of epithelial disorders. *Histopathology* 9: 825-840.
- Broekaert, D., et al. 1990. An investigation of cytokeratin expression in skin epithelial cysts and some uncommon types of cystic tumours using chain-specific antibodies. *Arch. Dermatol. Res.* 282: 383-391.

SOURCE

pan-Cytokeratin (AE13) is a mouse monoclonal antibody raised against hair keratins 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.

pan-Cytokeratin (AE13) is available conjugated to agarose (sc-57012 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57012 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57012 PE), fluorescein (sc-57012 FITC), Alexa Fluor® 488 (sc-57012 AF488), Alexa Fluor® 546 (sc-57012 AF546), Alexa Fluor® 594 (sc-57012 AF594) or Alexa Fluor® 647 (sc-57012 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-57012 AF680) or Alexa Fluor® 790 (sc-57012 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

pan-Cytokeratin (AE13) is recommended for detection of the family of hair cortex keratins 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).

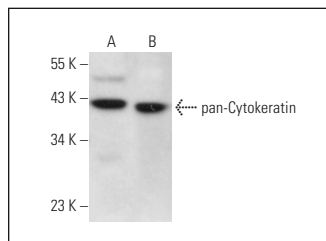
Molecular Weight of pan-Cytokeratin: 40-59 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, SK-BR-3 cell lysate: sc-2218 or A-431 whole cell lysate: sc-2201.

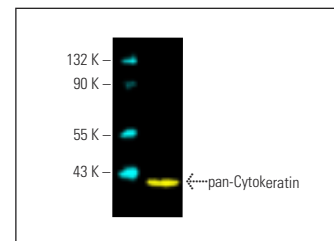
STORAGE

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

DATA



pan-Cytokeratin (AE13): sc-57012. Western blot analysis of pan-Cytokeratin expression in A-431 (A) and Caco-2 (B) whole cell lysates.



pan-Cytokeratin (AE13) Alexa Fluor® 488: sc-57012 AF488. Direct fluorescent western blot analysis of pan-Cytokeratin expression in SK-BR-3 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-516791.sc-516791.

SELECT PRODUCT CITATIONS

- Sakamoto, K., et al. 2011. Down-regulation of keratin 4 and keratin 13 expression in oral squamous cell carcinoma and epithelial dysplasia: a clue for histopathogenesis. *Histopathology* 58: 531-542.
- Leung, Y., et al. 2013. Label retaining cells (LRCs) with myoepithelial characteristic from the proximal acinar region define stem cells in the sweat gland. *PLoS ONE* 8: e74174.
- Hughes, M.W., et al. 2014. Disrupted ectodermal organ morphogenesis in mice with a conditional histone deacetylase 1, 2 deletion in the epidermis. *J. Invest. Dermatol.* 134: 24-32.
- Fang, C., et al. 2016. Conditional knockout in mice reveals the critical roles of Ppp2ca in epidermis development. *Int. J. Mol. Sci.* 17: 756.
- Yukimori, A., et al. 2017. Genetic basis of calcifying cystic odontogenic tumors. *PLoS ONE* 12: e0180224.
- Fernandez-Guerrero, M., et al. 2020. Mammalian-specific ectodermal enhancers control the expression of Hoxc genes in developing nails and hair follicles. *Proc. Natl. Acad. Sci. USA* 117: 30509-30519.
- Aguiar, A., et al. 2021. Human cytomegalovirus replication and infection-induced syncytia formation in labial, foreskin, and fetal lung fibroblasts. *Viruses* 13: 2355.
- Lloyd-Lewis, B., et al. 2022. *In vivo* imaging of mammary epithelial cell dynamics in response to lineage-biased Wnt/β-catenin activation. *Cell Rep.* 38: 110461.
- Castilla-Ibeas, A., et al. 2023. Failure of digit tip regeneration in the absence of Lmx1b suggests Lmx1b functions disparate from dorsoventral polarity. *Cell Rep.* 42: 111975.

RESEARCH USE

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