

Cytokeratin 20 (E-9): sc-271183

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as 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. Cytokeratin 20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract, and Cytokeratin 20 is a useful marker of pancreatic and colorectal cancer. Cytokeratin 20 is also helpful in distinguishing different types of highly related carcinomas, such as renal oncocytomas from renal cell carcinomas.

REFERENCES

1. van der Velden, L.A., et al. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. *Head Neck* 15: 133-146.
2. Moll, R., et al. 1993. The human gene encoding Cytokeratin 20 and its expression during fetal development and in gastrointestinal carcinomas. *Differentiation* 53: 75-93.

CHROMOSOMAL LOCATION

Genetic locus: KRT20 (human) mapping to 17q21.2; Krt20 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 20 (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 39-74 near the N-terminus of Cytokeratin 20 of human origin.

PRODUCT

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

Cytokeratin 20 (E-9) is available conjugated to agarose (sc-271183 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271183 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271183 PE), fluorescein (sc-271183 FITC), Alexa Fluor[®] 488 (sc-271183 AF488), Alexa Fluor[®] 546 (sc-271183 AF546), Alexa Fluor[®] 594 (sc-271183 AF594) or Alexa Fluor[®] 647 (sc-271183 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271183 AF680) or Alexa Fluor[®] 790 (sc-271183 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271183 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

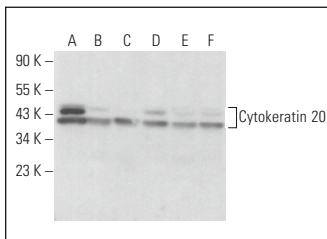
Cytokeratin 20 (E-9) is recommended for detection of Cytokeratin 20 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cytokeratin 20 siRNA (h): sc-43313, Cytokeratin 20 siRNA (m): sc-43314, Cytokeratin 20 shRNA Plasmid (h): sc-43313-SH, Cytokeratin 20 shRNA Plasmid (m): sc-43314-SH, Cytokeratin 20 shRNA (h) Lentiviral Particles: sc-43313-V and Cytokeratin 20 shRNA (m) Lentiviral Particles: sc-43314-V.

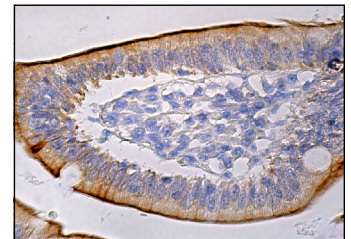
Molecular Weight of Cytokeratin 20: 46 kDa.

Positive Controls: HT-29 whole cell lysate: sc-364232, NIH/3T3 whole cell lysate: sc-2210 or F9 cell lysate: sc-2245.

DATA



Cytokeratin 20 (E-9): sc-271183. Western blot analysis of Cytokeratin 20 expression in HT-29 (A), HCT-116 (B), A-10 (C), P19 (D), NIH/3T3 (E) and F9 (F) whole cell lysates.



Cytokeratin 20 (E-9): sc-271183. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing striated border and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yang, X. and Meng, G. 2019. Establishment of a non-small-cell lung cancer-liver metastasis patient-derived tumor xenograft model for the evaluation of patient-tailored chemotherapy. *Biosci. Rep.* 39: BSR20182082.
2. Kim, S.C., et al. 2022. Multifocal organoid capturing of colon cancer reveals pervasive intratumoral heterogeneous drug responses. *Adv. Sci.* 9: e2103360.
3. Jeong, N., et al. 2022. Multifocal organoids reveal clonal associations between synchronous intestinal tumors with pervasive heterogeneous drug responses. *NPJ Genom. Med.* 7: 42.
4. Yeh, C.H., et al. 2024. Chlorogenic acid intravesical therapy changes acute voiding behavior of systemic lipopolysaccharide inflammation-induced cystitis bladder in mice. *Toxics* 12: 239.

STORAGE

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