

Cytokeratin 5/8 (5F295): sc-70928

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. Cytokeratin 5 is expressed in normal basal cells. Mutations of the Cytokeratin 5 gene (KRT5) have been shown to result in the autosomal dominant disorder epidermolysis bullosa (EB). Cytokeratin 8 expression is seen in epithelium and epithelium-derived tumors. 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

1. Leube, R.E., et al. 1986. Cytokeratin expression in simple epithelia. III. Detection of mRNAs encoding human Cytokeratins nos. 8 and 18 in normal and tumor cells by hybridization with cDNA sequences *in vitro* and *in situ*. Differentiation 33: 69-85.
2. 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.
3. Silen, A., et al. 1994. Evaluation of a new tumor marker for Cytokeratin 8 and 18 fragments in healthy individuals and prostate cancer patients. Prostate 24: 326-332.

SOURCE

Cytokeratin 5/8 (5F295) is a mouse monoclonal antibody raised against the human lung cancer cell line, MR21.

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 5/8 (5F295) is available conjugated to either phycoerythrin (sc-70928 PE) or fluorescein (sc-70928 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

Cytokeratin 5/8 (5F295) is recommended for detection of Cytokeratin 5/8 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); may cross-react with Cytokeratin 18.

Molecular Weight of Cytokeratin 5: 58 kDa.

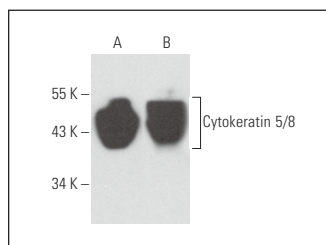
Molecular Weight of Cytokeratin 8: 55 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 cell lysate: sc-2227 or SK-BR-3 cell lysate: sc-2218.

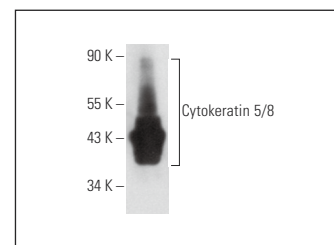
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cytokeratin 5/8 (5F295): sc-70928. Western blot analysis of Cytokeratin 5/8 expression in Hep G2 (A) and A-431 (B) whole cell lysates.



Cytokeratin 5/8 (5F295): sc-70928. Western blot analysis of Cytokeratin 5/8 expression in SK-BR-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Okumura, N., et al. 2013. β-catenin functions pleiotropically in differentiation and tumorigenesis in mouse embryo-derived stem cells. PLoS ONE 8: e63265.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **pan-Cytokeratin (C11): sc-8018** for pan-Cytokeratin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.