

# Cytokeratin 8 (19): sc-130312

## 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 8 expression is seen in epithelium and epithelium-derived tumors. The Cytokeratin 8 and 18 pair are normally expressed in simple epithelia, but not in stratified epithelial cells. Research indicates that squamous cell carcinomas derived from stratified epithelia show abnormal expression of Cytokeratin 8 and 18, although it is not known whether these proteins contribute to the malignant phenotype of the cells. Expression of Cytokeratin 8 and 18 in oral squamous cell carcinomas is an independent prognostic marker that indicates a poor prognosis. Cytokeratin 8 expression correlates with malignancy in leukoplakia and carcinomas of the head and neck; it is expressed in all non-small-cell lung cancers. Cytokeratin 8 has been shown to possess extracellular epitopes on tumor cells, which may represent valuable targets for therapy.

## 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.
4. Silen, A., et al. 1995. A novel IRMA and ELISA for quantifying Cytokeratin 8 and 18 fragments in the sera of healthy individuals and cancer patients. *Scan. J. Clin. Lab. Invest.* 55: 153-161.
5. Fujita, J., et al. 1999. Detection of large molecular weight Cytokeratin 8 as carrier protein of CA19-9 in non-small-cell lung cancer cell lines. *Br. J. Cancer* 81: 769-773.
6. Raul, U., et al. 2004. Implications of Cytokeratin 8/18 filament formation in stratified epithelial cells: induction of transformed phenotype. *Int. J. Cancer* 111: 662-668.
7. Gires, O., et al. 2005. Cytokeratin 8 associates with the external leaflet of plasma membranes in tumour cells. *Biochem. Biophys. Res. Commun.* 328: 1154-1162.
8. Gires, O., et al. 2006. CK8 correlates with malignancy in leukoplakia and carcinomas of the head and neck. *Biochem. Biophys. Res. Commun.* 343: 252-259.

## CHROMOSOMAL LOCATION

Genetic locus: KRT8 (human) mapping to 12q13.13; Krt8 (mouse) mapping to 15 F3.

## SOURCE

Cytokeratin 8 (19) is a mouse monoclonal antibody raised against recombinant Cytokeratin 8 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

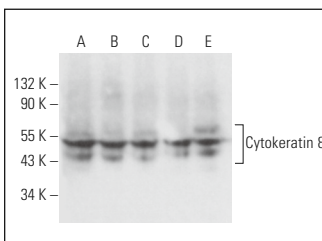
Cytokeratin 8 (19) is recommended for detection of Cytokeratin 8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cytokeratin 8 siRNA (h): sc-35156, Cytokeratin 8 siRNA (m): sc-72111, Cytokeratin 8 shRNA Plasmid (h): sc-35156-SH, Cytokeratin 8 shRNA Plasmid (m): sc-72111-SH, Cytokeratin 8 shRNA (h) Lentiviral Particles: sc-35156-V and Cytokeratin 8 shRNA (m) Lentiviral Particles: sc-72111-V.

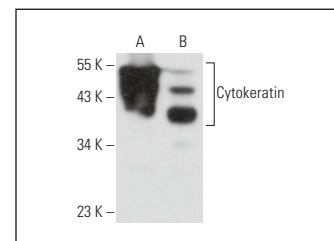
Molecular Weight of Cytokeratin 8: 40-55 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 cell lysate: sc-2227 or Sol8 cell lysate: sc-2249.

## DATA



Cytokeratin 8 (19): sc-130312. Western blot analysis of Cytokeratin 8 expression in SP2/O (A), NIH/3T3 (B), Sol8 (C), C3H/10T1/2 (D) and RAT2 (E) whole cell lysates.



Cytokeratin 8 (19): sc-130312. Western blot analysis of Cytokeratin 8 expression in Hep G2 (A) and A-431 (B) whole cell lysates.

## 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.



See **Cytokeratin 8 (C51): sc-8020** for Cytokeratin 8 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488, 546, 594, 647, 680 and 790.