

Cytokeratin 8 (LP3K): sc-53266

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.

CHROMOSOMAL LOCATION

Genetic locus: KRT8 (human) mapping to 12q13.13.

SOURCE

Cytokeratin 8 (LP3K) is a mouse monoclonal antibody raised against neonatal keratinocytes 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.

STORAGE

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

APPLICATIONS

Cytokeratin 8 (LP3K) is recommended for detection of Cytokeratin 8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of Cytokeratin 8: 40-55 kDa.

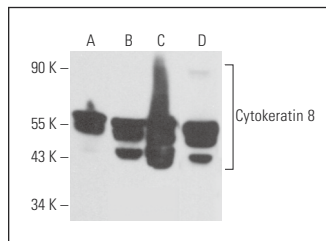
Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or SK-BR-3 cell lysate: sc-2218.

RECOMMENDED SUPPORT REAGENTS

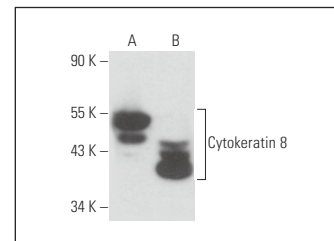
To ensure optimal results, the following support reagents are recommended:

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).

DATA



Cytokeratin 8 (LP3K): sc-53266. Western blot analysis of Cytokeratin 8 expression in HeLa (A), Hep G2 (B), SK-BR-3 (C) and A549 (D) whole cell lysates.



Cytokeratin 8 (LP3K): sc-53266. Western blot analysis of Cytokeratin 8 expression in JAR (A) and T24 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. D'Antonio, J.M., et al. 2010. Loss of androgen receptor-dependent growth suppression by prostate cancer cells can occur independently from acquiring oncogenic addiction to androgen receptor signaling. *PLoS ONE* 5: e11475.
2. Brennen, W.N., et al. 2013. Quantification of mesenchymal stem cells (MSCs) at sites of human prostate cancer. *Oncotarget* 4: 106-117.

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, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.