

Cytokeratin 8 (1E8): sc-58736

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. They 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.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 8 (1E8) is a mouse monoclonal antibody raised against C-terminal amino acids 472-483 of Cytokeratin 8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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 (1E8) is recommended for detection of Cytokeratin 8 of 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).

Cytokeratin 8 (1E8) is also recommended for detection of Cytokeratin 8 in additional species, including bovine.

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.

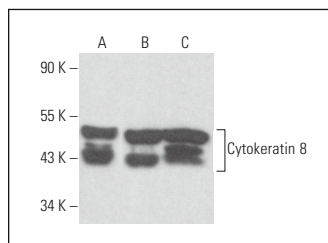
Molecular Weight of Cytokeratin 8: 40-55 kDa.

Positive Controls: A549 cell lysate: sc-2413, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

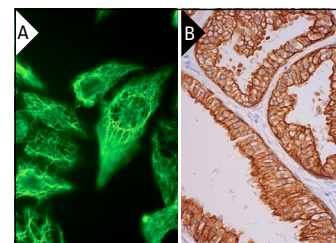
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cytokeratin 8 (1E8): sc-58736. Western blot analysis of Cytokeratin 8 expression in Hep G2 (A), A549 (B) and MCF7 (C) whole cell lysates.



Cytokeratin 8 (1E8): sc-58736. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoskeletal staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Jones, D.C., et al. 2016. Allele-specific recognition by LILRB3 and LILRA6 of a cytokeratin 8-associated ligand on necrotic glandular epithelial cells. *Oncotarget* 7: 15618-15631.
2. Lv, J., et al. 2017. Cdc42 regulates LPS-induced proliferation of primary pulmonary microvascular endothelial cells via ERK pathway. *Microvasc. Res.* 109: 45-53.
3. Wang, J., et al. 2020. Transient receptor potential canonical 1 channel mediates the mechanical stress-induced epithelial-mesenchymal transition of human bronchial epithelial (16HBE) cells. *Int. J. Mol. Med.* 46: 320-330.
4. Furia, L., et al. 2022. Automated multimodal fluorescence microscopy for hyperplex spatial-proteomics: coupling microfluidic-based immunofluorescence to high resolution, high sensitivity, three-dimensional analysis of histological slides. *Front. Oncol.* 12: 960734.

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.