

Cytokeratin 8 (M20): sc-52324

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.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 8 (M20) is a mouse monoclonal antibody raised against keratin isolated from breast carcinoma cell line MCF7 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cytokeratin 8 (M20) 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) and flow cytometry (1 µg per 1 x 10⁶ cells).

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: JEG-3 whole cell lysate: sc-364255, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

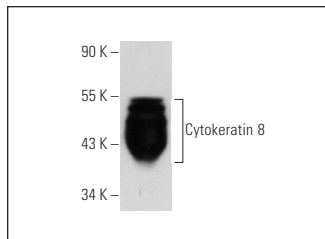
STORAGE

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

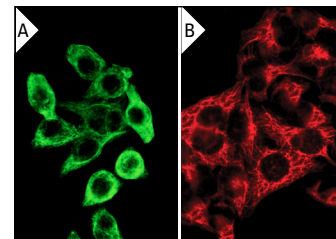
RESEARCH USE

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

DATA



Cytokeratin 8 (M20): sc-52324. Western blot analysis of Cytokeratin 8 expression in MCF7 whole cell lysate.



Cytokeratin 8 (M20): sc-52324. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal (A) and cytoplasmic (B) localization.

SELECT PRODUCT CITATIONS

1. Provenzano, P.P., et al. 2008. Mammary epithelial-specific disruption of focal adhesion kinase retards tumor formation and metastasis in a transgenic mouse model of human breast cancer. *Am. J. Pathol.* 173: 1551-1565.
2. Biniossek, M.L., et al. 2013. Quantitative proteomic profiling of tumor cell response to telomere dysfunction using isotope-coded protein labeling (ICPL) reveals interaction network of candidate senescence markers. *J. Proteomics* 91: 515-535.
3. Vega, A., et al. 2014. Hepatotoxicity induced by neonatal exposure to diethylstilbestrol is maintained throughout adulthood via the nuclear receptor SHP. *Expert Opin. Ther. Targets* 18: 1367-1376.
4. Giovannini, C., et al. 2016. Molecular and proteomic insight into Notch1 characterization in hepatocellular carcinoma. *Oncotarget* 7: 39609-39626.
5. Kasai, Y., et al. 2016. Brush biopsy of human oral mucosal epithelial cells as a quality control of the cell source for fabrication of transplantable epithelial cell sheets for regenerative medicine. *Regen. Ther.* 4: 71-77.
6. Bizzarro, V., et al. 2017. Hypoxia regulates ANXA1 expression to support prostate cancer cell invasion and aggressiveness. *Cell Adh. Migr.* 11: 247-260.
7. Yang, Y., et al. 2017. Derivation of pluripotent stem cells with *in vivo* embryonic and extraembryonic potency. *Cell* 169: 243-257.e25.
8. Li, H., et al. 2017. OIP5, a target of miR-15b-5p, regulates hepatocellular carcinoma growth and metastasis through the AKT/mTORC1 and β -catenin signaling pathways. *Oncotarget* 8: 18129-18144.
9. Warin, J., et al. 2024. *In vitro* and *in vivo* models define a molecular signature reference for human embryonic notochordal cells. *iScience* 27: 109018.



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.