

# Cytokeratin 8 (C51): sc-8020

## BACKGROUND

Cytokeratin 8 (also designated KRT8 antibody, or Keratin 8 antibody) 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; Krt8 (mouse) mapping to 15 F3.

## SOURCE

Cytokeratin 8 (C51) is a mouse monoclonal antibody raised against a cytoskeleton preparation of HeLa cells of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 8 (C51) is available conjugated to agarose (sc-8020 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8020 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8020 PE), fluorescein (sc-8020 FITC), Alexa Fluor® 488 (sc-8020 AF488), Alexa Fluor® 546 (sc-8020 AF546), Alexa Fluor® 594 (sc-8020 AF594) or Alexa Fluor® 647 (sc-8020 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8020 AF680) or Alexa Fluor® 790 (sc-8020 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

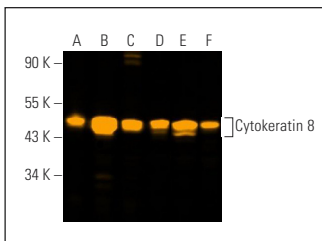
Cytokeratin 8 (C51) is recommended for detection of Cytokeratin 8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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.

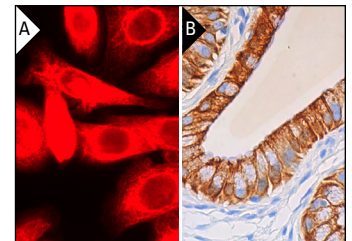
Molecular Weight of Cytokeratin 8: 40-55 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, BT-20 cell lysate: sc-2223 or SK-BR-3 cell lysate: sc-2218.

## DATA



Cytokeratin 8 (C51) Alexa Fluor® 594: sc-8020 AF594. Direct fluorescent western blot analysis of Cytokeratin 8 expression in JAR (A), MCF7 (B), SK-BR-3 (C), BT-20 (D), PC-3 (E) and Hep G2 (F) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Cytokeratin 8 (C51) PE: sc-8020 PE. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Cytokeratin 8 (C51): sc-8020. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

## SELECT PRODUCT CITATIONS

- Kim, J. and Freeman, M.R. 2003. JNK/SAPK mediates doxorubicin-induced differentiation and apoptosis in MCF-7 breast cancer cells. *Breast Cancer Res. Treat.* 79: 321-328.
- Mariño-Crespo, Ó., et al. 2018. Identification of proteins with the CDw75 epitope in human colorectal cancer. *Oncol. Lett.* 15: 580-587.
- Sharma, P., et al. 2019. Keratin 19 regulates cell cycle pathway and sensitivity of breast cancer cells to CDK inhibitors. *Sci. Rep.* 9: 14650.
- Rosenbluth, J.M., et al. 2020. Organoid cultures from normal and cancer-prone human breast tissues preserve complex epithelial lineages. *Nat. Commun.* 11: 1711.

## RESEARCH USE

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