

Cytokeratin 19 (B-1): sc-374192

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 and have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. For example, many types of cancer cells express Cytokeratin 19 (CK19), an epithelial cytoskeletal protein within the suprabasal squamous epithelium. Cytokeratin 19 is a specific marker of moderate to severe dysplasia and carcinoma *in situ* in oral cavity squamous epithelium, and measurement of Cytokeratin 19 may be a useful marker in diagnosing hepatoma. Cytokeratin 19 fragment levels in serum have been documented as a marker for lung cancer. Clinical investigations have suggested that serum CYFRA 21-1, a fragment of Cytokeratin 19, may be among the most useful tumor markers.

CHROMOSOMAL LOCATION

Genetic locus: KRT19 (human) mapping to 17q21.2; Krt19 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 19 (B-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-29 at the N-terminus of Cytokeratin 19 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374192 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Cytokeratin 19 (B-1) is recommended for detection of Cytokeratin 19 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Cytokeratin 19 (B-1) is also recommended for detection of Cytokeratin 19 in additional species, including equine and porcine.

Suitable for use as control antibody for Cytokeratin 19 siRNA (h): sc-35152, Cytokeratin 19 siRNA (m): sc-44949, Cytokeratin 19 shRNA Plasmid (h): sc-35152-SH, Cytokeratin 19 shRNA Plasmid (m): sc-44949-SH, Cytokeratin 19 shRNA (h) Lentiviral Particles: sc-35152-V and Cytokeratin 19 shRNA (m) Lentiviral Particles: sc-44949-V.

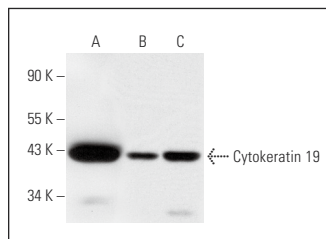
Molecular Weight of Cytokeratin 19: 40 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Hep G2 cell lysate: sc-2227 or Caco-2 cell lysate: sc-2262.

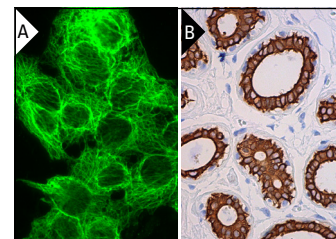
STORAGE

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

DATA



Cytokeratin 19 (B-1): sc-374192. Western blot analysis of Cytokeratin 19 expression in MCF7 (A), Hep G2 (B) and Caco-2 (C) whole cell lysates.



Cytokeratin 19 (B-1): sc-374192. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Jia, J., et al. 2014. Establishment of a pancreatic β cell proliferation model *in vitro* and a platform for diabetes drug screening. *Cytotechnology* 66: 687-697.
- Massie, I., et al. 2017. Evaluation of decellularized porcine jejunum as a matrix for lacrimal gland reconstruction *in vitro* for treatment of dry eye syndrome. *Invest. Ophthalmol. Vis. Sci.* 58: 5564-5574.
- Xiao, L., et al. 2020. ERK1/2 pathway is involved in the enhancement of fatty acids from *Phaeodactylum tricornutum* extract (PTE) on hair follicle cell proliferation. *Biomed Res. Int.* 2020: 2916104.
- Lai, J., et al. 2021. Comparison of the biological and functional characteristics of mesenchymal stem cells from intrahepatic and identical bone marrow. *Stem Cell Res.* 55: 102477.
- Gerardo-Ramírez, M., et al. 2023. Deletion of Cd44 inhibits metastasis formation of liver cancer in Nf2-mutant mice. *Cells* 12: 1257.
- Hu, D., et al. 2024. New advances of NG2-expressing cell subset in marrow mesenchymal stem cells as novel therapeutic tools for liver fibrosis/cirrhosis. *Stem Cell Res. Ther.* 15: 199.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **Cytokeratin 19 (A-3): sc-376126** for Cytokeratin 19 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.