SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 7/13/17/18 (LdS 23): sc-53265

BACKGROUND

Cytokeratins are a subfamily of intermediate filament keratins that are characterized by a remarkable biochemical diversity, which is represented in human epithelial tissues by at least 20 different polypeptides. Cytokeratins range in isoelectric range between 4.9 and 7.8. Cytokeratin 1 has the highest molecular weight, while Cytokeratin 19 has the lowest molecular weight. The cytokeratins are divided into the type I and type II subgroups. Type II family members comprise the basic to neutral members, Cytokeratins 1-8, while the type I group comprises the acidic members, Cytokeratins 9-20. Various epithelia in the human body usually express cytokeratins which are characteristic of the type of epithelium and related to the degree of maturation or differentiation within said epithelium. Cytokeratin subtype expression patterns are used to an increasing extent in the distinction of different types of epithelial malignancies. Cytokeratin 4 is expressed in differentiated layers of the mucosal and esophageal epithelia along with Cytokeratin 13.

REFERENCES

1. Trejdosiewicz, L.K., et al. 1986. Phenotypic analysis of cultured melanoma cells. Expression of cytokeratin-type intermediate filaments by the M5 human melanoma cell line. Exp. Cell Res. 164: 388-398.
2. Southgate, J., et al. 1987. Primary culture of human oral epithelial cells. Growth requirements and expression of differentiated characteristics. Lab. Invest. 56: 211-223.
3. Broekaert, D., et al. 1990. An investigation of cytokeratin expression in skin epithelial cysts and some uncommon types of cystic tumours using chain-specific antibodies. Arch. Dermatol. Res. 282: 383-391.
4. Markey, A.C., et al. 1991. Expression of simple epithelial keratins 8 and 18 in epidermal neoplasia. J. Invest. Dermatol. 97: 763-770.
5. 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.
6. Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. Biochem. Cell Biol. 73: 619-625.

SOURCE

Cytokeratin 7/13/17/18 (LdS 23) is a mouse monoclonal antibody raised against cytoskeletons from urothelial RT4 cell line of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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.

RESEARCH USE

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

APPLICATIONS

Cytokeratin 7/13/17/18 (LdS 23) is recommended for detection of Cytokeratin 7/13/17/18 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Cytokeratin 7: 54 kDa.

Molecular Weight of Cytokeratin 13: 52 kDa.

Molecular Weight of Cytokeratin 17: 46 kDa.

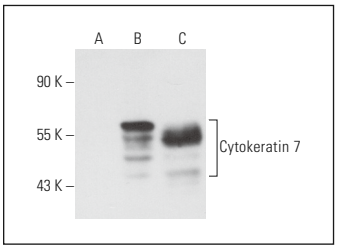
Molecular Weight of Cytokeratin 18: 45 kDa.

Positive Controls: NCI-H292 whole cell lysate: sc-364179, Cytokeratin 7 (h2): 293T Lysate: sc-173976 or T-47D cell lysate: sc-2293.

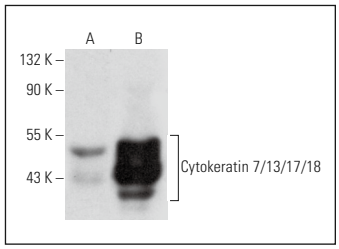
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Cytokeratin 7/13/17/18 (LdS 23): sc-53265. Western blot analysis of Cytokeratin 7 expression in non-transfected 293T: sc-117752 (**A**), human Cytokeratin 7 transfected 293T: sc-173976 (**B**) and A-431 (**C**) whole cell lysates.



Cytokeratin 7/13/17/18 (LdS 23): sc-53265. Western blot analysis of Cytokeratin 7/13/17/18 expression in T-47D (**A**) and NCI-H292 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, W., et al. 2022. Construction of tissue-engineered bladder scaffolds with composite biomaterials. Polymers 14: 2654.

CONJUGATES

See **Cytokeratin 7 (RCK105): sc-23876** for Cytokeratin 7 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.