

Cytokeratin 8/18 (NCL-5D3): sc-52325

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. Cyto-keratin 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/KRT18 (human) mapping to 12q13.13.

SOURCE

Cytokeratin 8/18 (NCL-5D3) is a mouse monoclonal antibody raised against breast carcinoma cell line MCF7.

PRODUCT

Each vial contains 500 µl ascites containing IgG_{2a} with < 0.1% sodium azide.

APPLICATIONS

Cytokeratin 8/18 (NCL-5D3) is recommended for detection of Cytokeratin 8 and Cytokeratin 18 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Molecular Weight of Cytokeratin 8/18: 40-55 kDa.

Positive Controls: Cytokeratin 8 (h3): 293T Lysate: sc-113509, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

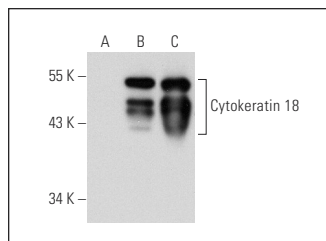
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

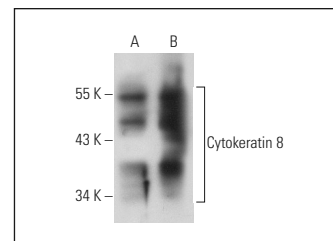
RESEARCH USE

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

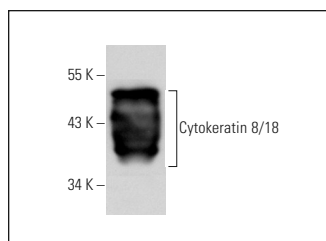
DATA



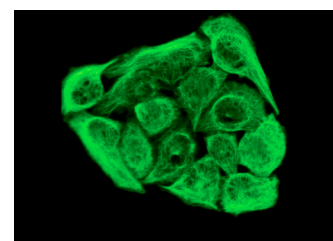
Cytokeratin 8/18 (NCL-5D3): sc-52325. Western blot analysis of Cytokeratin 18 expression in non-transfected 293: sc-110760 (A), human Cytokeratin 18 transfected 293: sc-110494 (B) and HeLa (C) whole cell lysates.



Cytokeratin 8/18 (NCL-5D3): sc-52325. Western blot analysis of Cytokeratin 8 expression in non-transfected: sc-117752 (A) and human Cytokeratin 8 transfected: sc-113509 (B) 293T whole cell lysates.



Cytokeratin 8/18 (NCL-5D3): sc-52325. Western blot analysis of Cytokeratin 8/18 expression in MCF7 whole cell lysate.



Cytokeratin 8/18 (NCL-5D3): sc-52325. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

- Xiao, L. and Tsutsui, T. 2012. Three-dimensional epithelial and mesenchymal cell co-cultures form early tooth epithelium invagination-like structures: expression patterns of relevant molecules. *J. Cell. Biochem.* 113: 1875-1885.
- Li, J., et al. 2013. Inflammatory myofibroblastic tumor with RANBP2 and ALK gene rearrangement: a report of 2 cases and literature review. *Diagn. Pathol.* 8: 147.
- Cantrell, M., et al. 2015. c-Jun N-terminal kinase 2 prevents luminal cell commitment in normal mammary glands and tumors by inhibiting p53/Notch1 and breast cancer gene 1 expression. *Oncotarget* 6: 11863-11881.
- Ranaei Pirmardan, E., et al. 2016. Characterization of a spontaneously generated murine retinal pigmented epithelium cell line; a model for *in vitro* experiments. *Exp. Cell Res.* 347: 332-338.
- Xiao, L. and Miwa, N. 2016. The lipophilic vitamin C derivative, 6-O-palmitoylascorbate protects human keratinocytes and 3D-human skin equivalents against X-ray-induced oxidative stress and apoptosis more markedly than L-ascorbic acid. *J. Cell. Biochem.* 118: 318-329.



See **Cytokeratin 18 (RGE53): sc-32329** for Cytokeratin 18 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.