SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 8 (Ks8.7): sc-101459

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (Ks8.7) is a mouse monoclonal antibody raised against cytoskeletal proteins from cultured Hela cells of human origin.

PRODUCT

Each vial contains IgG_1 in 500 µl of PBS with < 0.1% sodium azide and 1% stabilizer protein.

APPLICATIONS

Cytokeratin 8 (Ks8.7) is recommended for detection of Cytokeratin 8 of mouse, rat, human and hamster 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).

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.

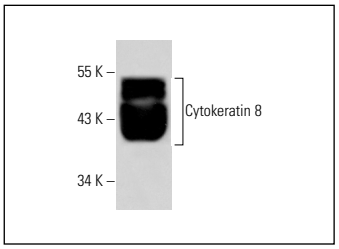
RESEARCH USE

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

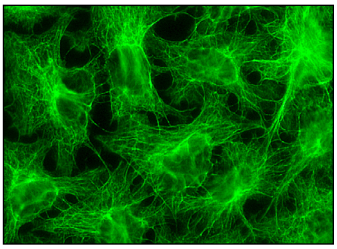
STORAGE

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

DATA



Cytokeratin 8 (Ks8.7): sc-101459. Western blot analysis of Cytokeratin 8 expression in MCF7 whole cell lysate.



Cytokeratin 8 (Ks8.7): sc-101459. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Yamashiro, Y., et al. 2010. Ectopic coexpression of keratin 8 and 18 promotes invasion of transformed keratinocytes and is induced in patients with cutaneous squamous cell carcinoma. Biochem. Biophys. Res. Commun. 399: 365-372.
2. Vatansever, H.S., et al. 2013. Analysis of transferred keratinocyte-like cells derived from mouse embryonic stem cells on experimental surgical skin wounds of mouse. Acta Histochem. 115: 32-41.
3. Hirata, H., et al. 2014. A rat tail temporary static compression model reproduces different stages of intervertebral disc degeneration with decreased notochordal cell phenotype. J. Orthop. Res. 32: 455-463.
4. Yongping, M., et al. 2015. Astragaloside prevents BDL-induced liver fibrosis through inhibition of notch signaling activation. J. Ethnopharmacol. 169: 200-209.
5. Xu, J.C., et al. 2016. Cultured networks of excitatory projection neurons and inhibitory interneurons for studying human cortical neurotoxicity. Sci. Transl. Med. 8: 333ra48.
6. Xu, M., et al. 2017. WNT10A mutation causes ectodermal dysplasia by impairing progenitor cell proliferation and KLF4-mediated differentiation. Nat. Commun. 8: 15397.
7. Lõhmussaar, K., et al. 2020. Assessing the origin of high-grade serous ovarian cancer using CRISPR-modification of mouse organoids. Nat. Commun. 11: 2660.
8. Sekhar, V., et al. 2022. ATP13A3 facilitates polyamine transport in human pancreatic cancer cells. Sci. Rep. 12: 4045.

CONJUGATES

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.