SANTA CRUZ BIOTECHNOLOGY, INC.

# pan-Cytokeratin (C11): sc-8018

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. For example, Cytokeratins 10 and 13 are expressed highly in a subset of squamous cell carcinomas while Cytokeratin 18 is expressed in a majority of adenocarcinomas and basal cell carcinomas.

## REFERENCES


1. Gatter, K.C., et al. 1985. Human lung tumours: a correlation of antigenic profile with histological type. Histopathology 9: 805-823.
2. Pulford, K.A., et al. 1985. The characterization of two monoclonal antikeratin antibodies and their use in the study of epithelial disorders. Histopathology 9: 825-840.


## SOURCE

pan-Cytokeratin (C11) is a mouse monoclonal antibody raised against keratin-enriched epidermoid carcinoma cell line A-431 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.

pan-Cytokeratin (C11) is available conjugated to agarose (sc-8018 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8018 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8018 PE), fluorescein (sc-8018 FITC), Alexa Fluor® 488 (sc-8018 AF488), Alexa Fluor® 546 (sc-8018 AF546), Alexa Fluor® 594 (sc-8018 AF594) or Alexa Fluor® 647 (sc-8018 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8018 AF680) or Alexa Fluor® 790 (sc-8018 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

pan-Cytokeratin (C11) is recommended for detection of Cytokeratin 4, 5, 6, 8, 10, 13 and 18 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), flow cytometry (1 µg per 1 x $10^6$ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of pan-Cytokeratin: 40-59 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

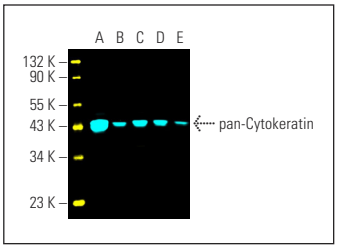
## STORAGE

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

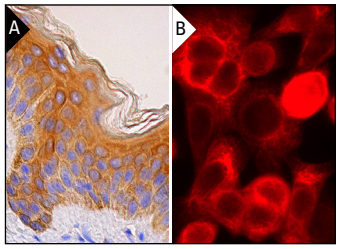
## RESEARCH USE

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

## DATA




pan-Cytokeratin (C11) Alexa Fluor® 647: sc-8018 AF647. Direct fluorescent western blot analysis of pan-Cytokeratin expression in MCF7 (**A**), HeLa (**B**), SW480 (**C**), A549 (**D**) and HEK293 (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.




pan-Cytokeratin (C11) HRP: sc-8018 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes (**A**). pan-Cytokeratin (C11) PE: sc-8018 PE. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

## SELECT PRODUCT CITATIONS


1. Reeves, R., et al. 2001. Architectural transcription factor HMGI(Y) promotes tumor progression and mesenchymal transition of human epithelial cells. Mol. Cell. Biol. 21: 575-594.
2. Kang, S.G., et al. 2001. Mechanism of growth inhibitory effect of Mitomycin-C on cultured human retinal pigment epithelial cells: apoptosis and cell cycle arrest. Curr. Eye Res. 22: 174-181.
3. Herlemann, A., et al. 2018. Inhibition of smooth muscle contraction and ARF6 activity by the inhibitor for cytohesin GEFs, secinH3, in the human prostate. Am. J. Physiol. Renal Physiol. 314: F47-F57.
4. Mapes, J., et al. 2018. Aberrantly high expression of the CUB and zona pellucida-like domain-containing protein 1 (CUZD1) in mammary epithelium leads to breast tumorigenesis. J. Biol. Chem. 293: 2850-2864.
5. Yoon, D., et al. 2018. Enhancement of wound healing efficiency mediated by artificial dermis functionalized with EGF or NRG1. Biomed. Mater. 13: 045007.
6. Yu, Q., et al. 2018. Inhibition of human prostate smooth muscle contraction by the LIM kinase inhibitors, SR7826 and LIMKi3. Br. J. Pharmacol. 175: 2077-2096.
7. Yu, Q., et al. 2018. Inhibition of prostatic smooth muscle contraction by the inhibitor of G protein-coupled receptor kinase 2/3, CMPD101. Eur. J. Pharmacol. 831: 9-19.
8. Hennenberg, M., et al. 2018. Inhibition of prostate smooth muscle contraction by inhibitors of polo-like kinases. Front. Physiol. 9: 734.


## PROTOCOLS

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