

# pan-Cytokeratin (34betaE12): sc-58823

## 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

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- 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.
- van der Velden, L.A., et al. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. *Head Neck* 15: 133-146.
- 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.
- Silen, A., et al. 1995. A novel IRMA and ELISA for quantifying cytokeratin 8 and 18 fragments in the sera of healthy individuals and cancer patients. *Scan. J. Clin. Lab. Invest.* 55: 153-161.
- Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.

## SOURCE

pan-Cytokeratin (34betaE12) is a mouse monoclonal antibody raised against solubilized pan-Cytokeratin from stratum corneum of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pan-Cytokeratin (34betaE12) is available conjugated to agarose (sc-58823 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58823 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58823 PE), fluorescein (sc-58823 FITC), Alexa Fluor<sup>®</sup> 488 (sc-58823 AF488), Alexa Fluor<sup>®</sup> 546 (sc-58823 AF546), Alexa Fluor<sup>®</sup> 594 (sc-58823 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-58823 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-58823 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-58823 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

pan-Cytokeratin (34betaE12) is recommended for detection of keratin polypeptides of 50, 56.5, 58 and 68 kDa in extracts of stratum corneum of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range ), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500); may cross-react with squamous, ductal and other complex epithelia, adenocarcinomas, breast, pancreas, bile duct, salivary gland and transitional cell carcinomas.

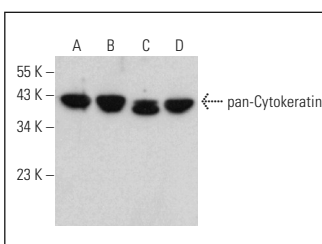
Molecular Weight of pan-Cytokeratin: 40-59 kDa.

Positive Controls: T-47D cell lysate: sc-2293, Hep G2 cell lysate: sc-2227 or ZR-75-1 cell lysate: sc-2241.

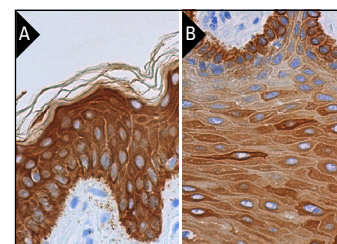
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



pan-Cytokeratin (34betaE12): sc-58823. Western blot analysis of pan-Cytokeratin expression in Hep G2 (A), T-47D (B), ZR-75-1 (C) and A549 (D) whole cell lysates.



pan-Cytokeratin (34betaE12): sc-58823. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic and membrane staining of squamous epithelial cells (B).

## 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.