

Cytokeratin 18 (H-80): sc-28264

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. Cytokeratin 18 contains two major phosphorylation sites on Ser 33 and Ser 52. Phosphorylation of Ser 18 is essential for the association of cytokeratin 18 with 14-3-3 proteins and is involved in keratin organization and distribution.

REFERENCES

- Lauerová, L., et al. 1988. Novel monoclonal antibodies defining epitope of human Cytokeratin 18 molecule. *Hybridoma* 7: 495-504.
- Vojtesek, B., et al. 1989. Monoclonal antibodies recognizing different epitopes of Cytokeratin No 18. *Folia Biol.* 35: 373-382.

CHROMOSOMAL LOCATION

Genetic locus: KRT18 (human) mapping to 12q13.13; Krt18 (mouse) mapping to 15 F3.

SOURCE

Cytokeratin 18 (H-80) is a rabbit polyclonal antibody raised against amino acids 1-80 mapping at the N-terminus of Cytokeratin 18 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cytokeratin 18 (H-80) is recommended for detection of Cytokeratin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cytokeratin 18 siRNA (h): sc-35151, Cytokeratin 18 siRNA (m): sc-45406, Cytokeratin 18 shRNA Plasmid (h): sc-35151-SH, Cytokeratin 18 shRNA Plasmid (m): sc-45406-SH, Cytokeratin 18 shRNA (h) Lentiviral Particles: sc-35151-V and Cytokeratin 18 shRNA (m) Lentiviral Particles: sc-45406-V.

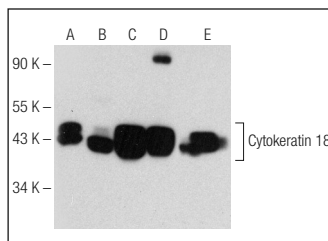
Molecular Weight of Cytokeratin 18: 45 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or SK-BR-3 cell lysate: sc-2218.

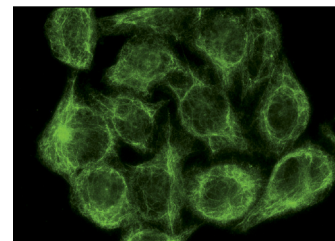
STORAGE

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

DATA



Cytokeratin 18 (H-80): sc-28264. Western blot analysis of Cytokeratin 18 expression in HeLa (A), Hep G2 (B), MCF7 (C), SKBR-3 (D) and T24 (E) whole cell lysates.



Cytokeratin 18 (H-80): sc-28264. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

- Neznanov, N., et al. 2005. Proteolytic cleavage of the p65-RelA subunit of NFκB during poliovirus infection. *J. Cell Biol.* 280: 24153-24158.
- Wang, H.B., et al. 2010. Reconstruction of endometrium *in vitro* via rabbit uterine endometrial cells expanded by sex steroid. *Fertil. Steril.* 93: 2385-2395.
- de Medina, P., et al. 2010. Auraptene is an inhibitor of cholesterol esterification and a modulator of estrogen receptors. *Mol. Pharmacol.* 78: 827-836.
- Walker, M.P., et al. 2010. An IGF1/insulin receptor substrate-1 pathway stimulates a mitotic kinase (cdk1) in the uterine epithelium during the proliferative response to estradiol. *J. Endocrinol.* 207: 225-235.
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- D'Amato, N.C., et al. 2012. Evidence for phenotypic plasticity in aggressive triple-negative breast cancer: human biology is recapitulated by a novel model system. *PLoS ONE* 7: e45684.
- Yan, X.L., et al. 2012. Mesenchymal stem cells from primary breast cancer tissue promote cancer proliferation and enhance mammosphere formation partially via EGF/EGFR/Akt pathway. *Breast Cancer Res. Treat.* 132: 153-164.
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- Shukla, S., et al. 2015. Apigenin blocks IKKα activation and suppresses prostate cancer progression. *Oncotarget* 6: 31216-31232.

RESEARCH USE

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