

Cytokeratin 1 (N-20): sc-17091

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 constitute up to 85% of a mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization, and they function to maintain the overall structural integrity of epithelial cells. The α -helical coiled-coil dimers associate laterally end-to-end to form 10-nm diameter filaments. Cytokeratins are useful markers of tissue differentiation, and they aid in the characterization of malignant tumors. Cytokeratin 1 is highly expressed in several malignancies including epithelioid hemangioendotheliomas, angiosarcomas, schwannomas, epithelioid sarcomas and synodal sarcomas. The gene encoding human Cytokeratin 1 maps to chromosome 12q13.13. Mutations in the gene encoding human Cytokeratin 1 lead to abnormal filament associations and epidermolytic hyperkeratosis.

REFERENCES

1. Popescu, N.C., et al. 1989. Two type II keratin genes are localized on human chromosome 12. *Hum. Genet.* 82: 109-112.
2. 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.
3. Yang, J.M., et al. 1994. Mutations in the H1 and 1A domains in the keratin 1 gene in epidermolytic hyperkeratosis. *J. Invest. Dermatol.* 102: 17-23.
4. Fuchs, E. 1995. Keratins and the skin. *Annu. Rev. Cell Dev. Biol.* 11: 123-153.
5. Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.

CHROMOSOMAL LOCATION

Genetic locus: KRT1 (human) mapping to 12q13.13.

SOURCE

Cytokeratin 1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cytokeratin 1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17091 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

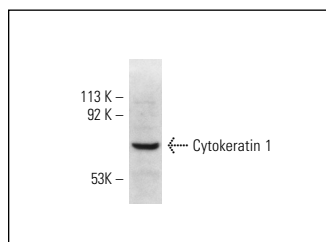
Cytokeratin 1 (N-20) is recommended for detection of Cytokeratin 1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cytokeratin 1 siRNA (h): sc-43285, Cytokeratin 1 shRNA Plasmid (h): sc-43285-SH and Cytokeratin 1 shRNA (h) Lentiviral Particles: sc-43285-V.

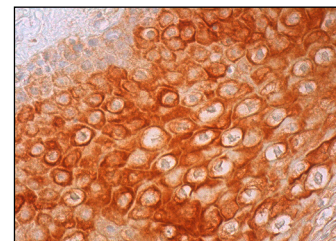
Molecular Weight of Cytokeratin 1: 67 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287.

DATA



Cytokeratin 1 (N-20): sc-17091. Western blot analysis of Cytokeratin 1 expression in mouse heart tissue extract.



Cytokeratin 1 (N-20): sc-17091. Immunoperoxidase staining of formalin fixed, paraffin-embedded human uterine cervix tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Ikemoto, S., et al. 2006. Laminin peptide-conjugated chitosan membrane: application for keratinocyte delivery in wounded skin. *J. Biomed. Mater. Res. A* 79: 716-722.
2. Berglund, S.R., et al. 2009. Proteomic analysis of low dose arsenic and ionizing radiation exposure on keratinocytes. *Proteomics* 9: 1925-1938.
3. Masuda, R., et al. 2009. A novel cell-adhesive scaffold material for delivering keratinocytes reduces granulation tissue in dermal wounds. *Wound Repair Regen.* 17: 127-135.
4. Peng, S., et al. 2011. Effects of Wnt5a protein on proliferation and apoptosis in JAR choriocarcinoma cells. *Mol. Med. Rep.* 4: 99-104.

PROTOCOLS

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