

Cytokeratin 5 (G-2): sc-377431

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 5 is expressed in normal basal cells. Mutations of the Cytokeratin 5 gene (KRT5) have been shown to result in the autosomal dominant disorder epidermolysis bullosa (EB).

REFERENCES

1. 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.
2. 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.
3. Marceau, N., et al. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.
4. Quillien, V., et al. 1995. Serum and tissue distribution of a fragment of Cytokeratin 19 (CYFRA 21-1) in lung cancer patients. *Anticancer Res.* 15: 2857-2863.
5. 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. *Scand. J. Clin. Lab. Invest.* 55: 153-161.
6. Stephens, K., et al. 1995. Epidermolysis bullosa simplex: a keratin 5 mutation is a fully dominant allele in epidermal cytoskeleton function. *Am. J. Hum. Genet.* 56: 577-585.

CHROMOSOMAL LOCATION

Genetic locus: KRT5 (human) mapping to 12q13.13; Krt5 (mouse) mapping to 15 F2.

SOURCE

Cytokeratin 5 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 13-47 near the N-terminus of Cytokeratin 5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Cytokeratin 5 (G-2) is recommended for detection of Cytokeratin 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Cytokeratin 5 (G-2) is also recommended for detection of Cytokeratin 5 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Cytokeratin 5 siRNA (h): sc-35153, Cytokeratin 5 siRNA (m): sc-60041, Cytokeratin 5 shRNA Plasmid (h): sc-35153-SH, Cytokeratin 5 shRNA Plasmid (m): sc-60041-SH, Cytokeratin 5 shRNA (h) Lentiviral Particles: sc-35153-V and Cytokeratin 5 shRNA (m) Lentiviral Particles: sc-60041-V.

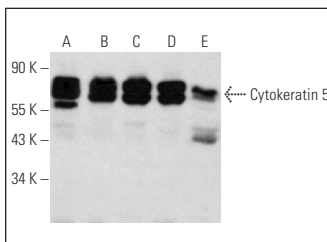
Molecular Weight of Cytokeratin 5: 58 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, PC-12 cell lysate: sc-2250 or 3T3-L1 cell lysate: sc-2243.

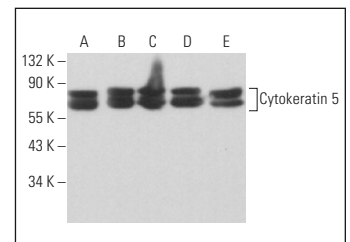
RECOMMENDED SUPPORT REAGENTS

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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Cytokeratin 5 (G-2): sc-377431. Western blot analysis of Cytokeratin 5 expression in A-431 (A), PC-12 (B), NRK (C), 3T3-L1 (D) and CSML0 (E) whole cell lysates.



Cytokeratin 5 (G-2): sc-377431. Western blot analysis of Cytokeratin 5 expression in A-431 (A), SK-MEL-24 (B), A-375 (C), A2058 (D) and C2C12 (E) whole cell lysates.

RESEARCH USE

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



See **Cytokeratin 5 (RCK103): sc-32721** for Cytokeratin 5 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.