

Cytokeratin 4 (N-13): sc-167581

BACKGROUND

Cytokeratins are a subfamily of intermediate filament keratins that are characterized by a remarkable biochemical diversity, which is represented in human epithelial tissues by at least 20 different polypeptides. Cytokeratins range in isoelectric range between 4.9 and 7.8. Cytokeratin 1 has the highest molecular weight, while Cytokeratin 19 has the lowest molecular weight. The cytokeratins are divided into the type I and type II subgroups. Type II family members comprise the basic to neutral members, Cytokeratins 1-8, while the type I group comprises the acidic members, Cytokeratins 9-20. Various epithelia in the human body usually express cytokeratins which are characteristic of the type of epithelium and related to the degree of maturation or differentiation within said epithelium. Cytokeratin subtype expression patterns are used to an increasing extent in the distinction of different types of epithelial malignancies. Cytokeratin 4 is expressed in differentiated layers of the mucosal and esophageal epithelia along with Cytokeratin 13.

REFERENCES

1. van Muijen, G.N., et al. 1986. Cell type heterogeneity of cytokeratin expression in complex epithelia and carcinomas as demonstrated by monoclonal antibodies specific for cytokeratins nos. 4 and 13. *Exp. Cell Res.* 162: 97-113.
2. 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.
3. 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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: KRT4 (human) mapping to 12q13.13.

SOURCE

Cytokeratin 4 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cytokeratin 4 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.

Blocking peptide available for competition studies, sc-167581 P, (100 µg 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.

APPLICATIONS

Cytokeratin 4 (N-13) is recommended for detection of Cytokeratin 4 of 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); non cross-reactive with other Cytokeratin family members.

Cytokeratin 4 (N-13) is also recommended for detection of Cytokeratin 4 in additional species, including equine and bovine.

Suitable for use as control antibody for Cytokeratin 4 siRNA (h): sc-72078, Cytokeratin 4 shRNA Plasmid (h): sc-72078-SH and Cytokeratin 4 shRNA (h) Lentiviral Particles: sc-72078-V.

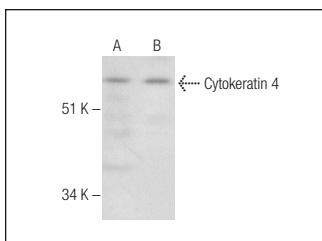
Molecular Weight of Cytokeratin 4: 67 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or SK-BR-3 cell lysate: sc-2218.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cytokeratin 4 (N-13): sc-167581. Western blot analysis of Cytokeratin 4 expression in A-431 (A) and SK-BR-3 (B) whole cell lysates.

RESEARCH USE

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

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Try **Cytokeratin 4 (0.N.344): sc-70920**, our highly recommended monoclonal alternative to Cytokeratin 4 (N-13).