SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 9 (D-16): sc-49431

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins 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. Cytokeratin 9 is an unusually large, type I acidic cytokeratin that differentiates human plantar and palmar epidermal cells. Cytokeratin 9 localizes to the suprabasal layers as well as the upper epidermal layers such as the glandular ridges and interridges. The domains of Cytokeratin 9 include a head, an α-helical coiled-coil-forming rod and a tail; Cytokeratin 9 shares significant homology with Cytokeratin 10. Mutations in the Cytokeratin 9 gene correlate with the development of epidermolytic palmoplantar keratoderma (EPPK), an autosomal dominant inherited skin disorder that is characterized by hyperkeratosis of the skin over the palms and soles.

REFERENCES

1. Moll, I., et al. 1987. Distribution of a special subset of keratinocytes characterized by the expression of Cytokeratin 9 in adult and fetal human epidermis of various body sites. Differentiation 33: 254-265.
2. Langbein, L., et al. 1994. Molecular characterization of the body site-specific human epidermal Cytokeratin 9: cDNA cloning, amino acid sequence, and tissue specificity of gene expression. Differentiation 55: 57-71.
3. Langbein, L., et al. 1994. Molecular characterization of the body site-specific human epidermal cytokeratin 9: cDNA cloning, amino acid sequence, and tissue specificity of gene expression. Differentiation 55: 164.
4. Stoner, M.L. and Wood, F.M. 1999. Cultured epithelial autograft "take" confirmed by the presence of Cytokeratin 9. J. Invest. Dermatol. 112: 391-392.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607606. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: KRT9 (human) mapping to 17q21.2.

SOURCE

Cytokeratin 9 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cytokeratin 9 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-49431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Cytokeratin 9 (D-16) is recommended for detection of Cytokeratin 9 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).

Suitable for use as control antibody for Cytokeratin 9 siRNA (h): sc-60501, Cytokeratin 9 shRNA Plasmid (h): sc-60501-SH and Cytokeratin 9 shRNA (h) Lentiviral Particles: sc-60501-V.

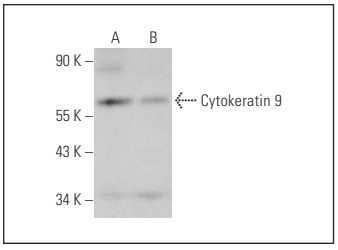
Molecular Weight of Cytokeratin 9: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human tonsil extract: sc-364263.

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 9 (D-16): sc-49431. Western blot analysis of Cytokeratin 9 expression in human tonsil tissue extract (**A**) and HeLa whole cell lysate (**B**).

STORAGE

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