

Keratin 2 (U-25): sc-101993

BACKGROUND

The keratin multigene family is made of the "soft" epithelial cytokeratins and the "hard" hair keratins. While the epithelial cytokeratins are involved in the layering and formation of epithelia, the hair keratins are responsible for creating nails and hair. There are two types of keratins: the acidic class I keratin proteins and the basic/neutral class II keratin proteins. Keratin 2, also known as Cytokeratin-2E and K2E, is a 645 amino acid class II epithelial keratin protein. Keratin 2 functions in epidermal keratinocyte activation and proliferation and plays a part in terminal cornification. Expressed highly in the upper epithelial tissues, Keratin 2 forms heterotetramers with two class I keratins and another class II keratin. Defects in Keratin 2 have been linked to ichthyosis bullosa of Siemens (IBS), a rare autosomal dominant skin disorder characterized by extensive blistering and fragility of the epidermis from birth.

REFERENCES

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- Smith, F.J., et al. 1998. Genomic organization and fine mapping of the Keratin 2E gene (KRT2E): K2E V1 domain polymorphism and novel mutations in ichthyosis bullosa of Siemens. *J. Invest. Dermatol.* 111: 817-821.
- Smith, L.T., et al. 1999. Ontogeny and regional variability of Keratin 2E (K2E) in developing human fetal skin: a unique spatial and temporal pattern of keratin expression in development. *Br. J. Dermatol.* 140: 582-591.
- Suga, Y., et al. 2000. Hot spot mutations in Keratin 2E suggest a correlation between genotype and phenotype in patients with ichthyosis bullosa of Siemens. *Exp. Dermatol.* 9: 11-15.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600194. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: KRT2 (human) mapping to 12q13.13.

SOURCE

Keratin 2 (U-25) is a purified rabbit polyclonal antibody raised against Keratin 2 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

Keratin 2 (U-25) is recommended for detection of Keratin 2 of human and dog 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), 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 Keratin 2 siRNA (h): sc-95659, Keratin 2 shRNA Plasmid (h): sc-95659-SH and Keratin 2 shRNA (h) Lentiviral Particles: sc-95659-V.

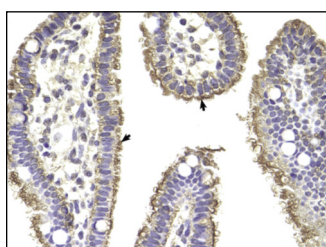
Molecular Weight of Keratin 2: 70 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

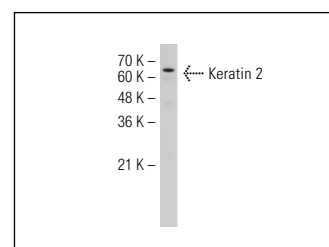
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Keratin 2 (U-25): sc-101993. Immunoperoxidase staining of formalin fixed, paraffin-embedded human intestine tissue showing cytoplasmic staining.



Keratin 2 (U-25): sc-101993. Western blot analysis of Keratin 2 expression in Jurkat whole cell lysate.

STORAGE

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

PROTOCOLS

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