

Keratin 28 (C-12): sc-136724

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 hair Keratins: the acidic type I hair Keratin proteins and the basic/neutral type II hair Keratin proteins. Keratin 28 (Keratin, type I cytoskeletal 28), also known as Keratin-25D or type I inner root sheath-specific keratin-K25irs4, is a 464 amino acid cytoplasmic protein that belongs to the intermediate filament family. Highly expressed in scalp and skin, Keratin 28 is found at lower levels in thymus and the medulla of beard hair. The gene encoding Keratin 28 maps to human chromosome 17q21.2 and mouse chromosome 11 D.

REFERENCES

- Heid, H.W., et al. 1986. The complement of native α -keratin polypeptides of hair-forming cells: a subset of eight polypeptides that differ from epithelial cytokeratins. *Differentiation* 32: 101-119.
- Rogers, M.A., et al. 1995. Sequence data and chromosomal localization of human type I and type II hair keratin genes. *Exp. Cell Res.* 220: 357-362.
- Rogers, M.A., et al. 1997. Sequences and differential expression of three novel human type-II hair keratins. *Differentiation* 61: 187-194.
- Bowden, P.E., et al. 1998. Characterization and chromosomal localization of human hair-specific keratin genes and comparative expression during the hair growth cycle. *J. Invest. Dermatol.* 110: 158-164.
- Langbein, L., et al. 1999. The catalog of human hair keratins. I. Expression of the nine type I members in the hair follicle. *J. Biol. Chem.* 274: 19874-19884.
- Rogers, M.A., et al. 2004. The human type I keratin gene family: characterization of new hair follicle specific members and evaluation of the chromosome 17q21.2 gene domain. *Differentiation* 72: 527-540.
- Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. *J. Cell Biol.* 174: 169-174.
- Langbein, L., et al. 2006. K25 (K25irs1), K26 (K25irs2), K27 (K25irs3), and K28 (K25irs4) represent the type I inner root sheath keratins of the human hair follicle. *J. Invest. Dermatol.* 126: 2377-2386.

CHROMOSOMAL LOCATION

Genetic locus: KRT28 (human) mapping to 17q21.2; Krt28 (mouse) mapping to 11 D.

SOURCE

Keratin 28 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Keratin 28 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 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-136724 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Keratin 28 (C-12) is recommended for detection of Keratin 28 of mouse and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Keratin family members.

Keratin 28 (C-12) is also recommended for detection of Keratin 28 in additional species, including canine.

Suitable for use as control antibody for Keratin 28 siRNA (h): sc-94189, Keratin 28 shRNA Plasmid (h): sc-94189-SH and Keratin 28 shRNA (h) Lentiviral Particles: sc-94189-V.

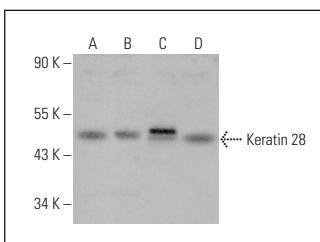
Molecular Weight of Keratin 28: 55 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

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



Keratin 28 (C-12): sc-136724. Western blot analysis of Keratin 28 expression in MDA-MB-435S (A), HeLa (B), NIH/3T3 (C) and Jurkat (D) whole cell lysates.

RESEARCH USE

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