

Keratin 25 (B-2): sc-398320

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 25, also known as KRT25A or KRT25, is a 450 amino acid cytoplasmic protein belonging to the intermediate filament family. Essential for the proper assembly of type I and type II keratin protein complexes, Keratin 25 is strongly expressed in skin and scalp. Keratin 25 exists as a heterotetramer of two type I and two type II keratins and interacts with Cytokeratin 6. Keratin 25 is required for proper formation of keratin intermediate filaments in the inner root sheath (irs).

REFERENCES

1. 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.
2. Winter, H., et al. 1997. A new mutation in the type II hair cortex keratin hHb1 involved in the inherited hair disorder monilethrix. *Hum. Genet.* 101: 165-169.
3. 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.
4. Winter, H., et al. 1998. A variable monilethrix phenotype associated with a novel mutation, Glu402Lys, in the helix termination motif of the type II hair keratin hHb1. *J. Invest. Dermatol.* 111: 169-172.

CHROMOSOMAL LOCATION

Genetic locus: KRT25 (human) mapping to 17q21.2.

SOURCE

Keratin 25 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 60-81 near the N-terminus of Keratin 25 of human origin.

PRODUCT

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

Keratin 25 (B-2) is available conjugated to agarose (sc-398320 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398320 PE), fluorescein (sc-398320 FITC), Alexa Fluor[®] 488 (sc-398320 AF488), Alexa Fluor[®] 546 (sc-398320 AF546), Alexa Fluor[®] 594 (sc-398320 AF594) or Alexa Fluor[®] 647 (sc-398320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398320 AF680) or Alexa Fluor[®] 790 (sc-398320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Keratin 25 (B-2) is recommended for detection of Keratin 25 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 Keratin 25 siRNA (h): sc-93610, Keratin 25 shRNA Plasmid (h): sc-93610-SH and Keratin 25 shRNA (h) Lentiviral Particles: sc-93610-V.

Molecular Weight (predicted) of Keratin 25: 49 kDa.

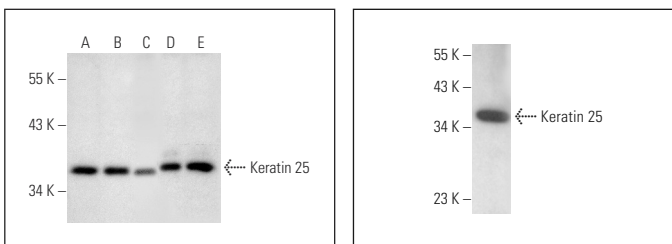
Molecular Weight (observed) of Keratin 25: 37 kDa.

Positive Controls: A-375 cell lysate: sc-3811, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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



Keratin 25 (B-2): sc-398320. Western blot analysis of Keratin 25 expression in HeLa (A), Jurkat (B), A-375 (C), K-562 (D) and PANC-1 (E) whole cell lysates.

Keratin 25 (B-2): sc-398320. Western blot analysis of Keratin 25 expression in SUP-T1 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.

RESEARCH USE

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

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