

HR (h): 293T Lysate: sc-116984

BACKGROUND

HR (protein hairless) is a 1,189 amino acid protein which is expressed as two isoforms produced by alternative splicing. The two isoforms are expressed in a variety of tissues in varying concentrations. Isoform 1 is more abundant than isoform 2 and is expressed at low levels in kidneys and testis, while isoform 2 is expressed abundantly in skin. Both isoforms are also present together in many tissues and are expressed strongly in small intestine and brain and weakly in trachea. HR is thought to be a transcription factor involved in hair growth. Hair growth occurs in three phases, known as anagen, catagen and telogen, which are phases where growth, regression and rest, respectively, are taking place. By unknown mechanisms, HR is thought to regulate one of the hair growth phases, and to work with vitamin D receptor (VDR) to regulate hair follicle cycling. Defects in HR may cause two serious ailments known as alopecia universalis congenita (ALUNC) and atrichia with papular lesions (APL), which is also referred to as congenital atrichia. Both are autosomally recessive impairments. ALUNC is a rare condition in which hair follicles are produced without hair, while APL is a serious disease in which papillary lesions may cover the body and little to no hair is grown.

REFERENCES

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3. Djabali, K. and Christiano, A.M. 2004. Hairless contains a novel nuclear matrix targeting signal and associates with histone deacetylase 3 in nuclear speckles. *Differentiation* 72: 410-418.
4. Bergman, R., et al. 2005. The alopecias associated with vitamin D-dependent rickets type IIA and with hairless gene mutations: a comparative clinical, histologic, and immunohistochemical study. *Arch. Dermatol.* 141: 343-351.
5. Skorija, K., et al. 2005. Ligand-independent actions of the vitamin D receptor maintain hair follicle homeostasis. *Mol. Endocrinol.* 19: 855-862.
6. Zhang, J.T., et al. 2005. Molecular cloning of full-long cDNA sequences encoding hairless gene in the Kunming mouse. *Yi Chuan* 27: 908-914.
7. Bikle, D.D., et al. 2006. Development and progression of alopecia in the vitamin D receptor null mouse. *J. Cell. Physiol.* 207: 340-353.
8. Brancz-Bouvier, M.V., et al. 2008. The "bald mill hill" mutation in the mouse is associated with an abnormal, mislocalized HR bmh protein. *J. Invest. Dermatol.* 128: 311-321.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: HR (human) mapping to 8p21.3.

PRODUCT

HR (h): 293T Lysate represents a lysate of human HR transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HR (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HR antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

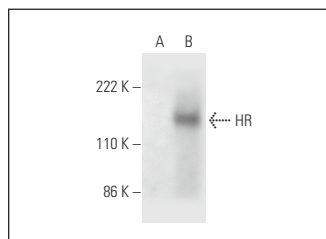
HR (D-4): sc-398176 is recommended as a positive control antibody for Western Blot analysis of enhanced human HR expression in HR transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



HR (D-4): sc-398176. Western blot analysis of HR expression in non-transfected: sc-117752 (A) and human HR transfected: sc-116984 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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