

HR (A-11): sc-514686

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

1. Potter, G.B., et al. 2001. The Hairless gene mutated in congenital hair loss disorders encodes a novel nuclear receptor corepressor. *Genes Dev.* 15: 2687-2701.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602302. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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.

CHROMOSOMAL LOCATION

Genetic locus: HR (human) mapping to 8p21.3; Hr (mouse) mapping to 14 D2.

SOURCE

HR (A-11) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of HR of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HR (A-11) is available conjugated to agarose (sc-514686 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514686 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514686 PE), fluorescein (sc-514686 FITC), Alexa Fluor® 488 (sc-514686 AF488), Alexa Fluor® 546 (sc-514686 AF546), Alexa Fluor® 594 (sc-514686 AF594) or Alexa Fluor® 647 (sc-514686 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514686 AF680) or Alexa Fluor® 790 (sc-514686 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HR (A-11) is recommended for detection of HR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 HR siRNA (h): sc-77654, HR siRNA (m): sc-146075, HR shRNA Plasmid (h): sc-77654-SH, HR shRNA Plasmid (m): sc-146075-SH, HR shRNA (h) Lentiviral Particles: sc-77654-V and HR shRNA (m) Lentiviral Particles: sc-146075-V.

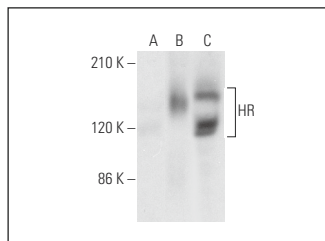
Molecular Weight of HR: 130 kDa.

Positive Controls: HR (h): 293T Lysate: sc-116984, Neuro-2A whole cell lysate: sc-364185 or F9 cell lysate: sc-2245.

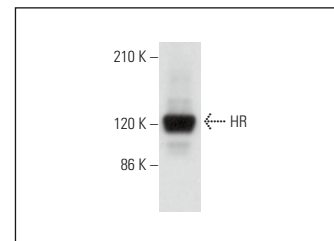
RECOMMENDED SUPPORT REAGENTS

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



HR (A-11): sc-514686. Western blot analysis of HR expression in non-transfected 293T: sc-117752 (A), human HR transfected 293T: sc-116984 (B) and F9 (C) whole cell lysates.



HR (A-11): sc-514686. Western blot analysis of HR expression in Neuro-2A whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhu, K., et al. 2017. Transgenic mice display hair loss and regrowth over-expressing mutant Hr gene. *Exp. Anim.* 66: 379-386.

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.