**BACKGROUND**

HR (protein Hairless) is a 1,189 amino acid protein which is expressed as 2 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 aillments, known as alopecia universalis congenita (ALUNC) and atrichia with papular lesions (APL), which is also referred to as congenital atrichia. Both are autonomously 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**


**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.

**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, 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 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) and F9 (C) whole cell lysates.

**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.

**PROTOCOLS**

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