

## HCR (H-300): sc-135052

### BACKGROUND

HCR (coiled-coil  $\alpha$ -helical rod protein 1, putative gene 8 protein) is a 782 amino acid protein that is encoded by human gene CCHCR1. It is believed to be a regulator of keratinocyte proliferation or differentiation. HCR is a nuclear protein abundantly expressed in heart, liver, skeletal muscle, kidney and pancreas, and to a lesser extent in lung and placenta. HCR is overexpressed in keratinocytes of psoriatic lesions. HCR is associated with susceptibility to psoriasis, a chronic inflammatory dermatosis that affects approximately 2% of the population. Psoriasis is a multifactorial disease characterized by red, scaly skin lesions that are usually found on the scalp, elbows and knees, and may be associated with severe arthritis. The lesions are caused by hyperproliferative keratinocytes and infiltration of inflammatory cells into the dermis and epidermis. The usual age of onset of psoriasis is between 15 and 30, although it can present at any age. Association of HCR with psoriasis seem to be due to linkage disequilibrium with CW\*0602, however, HCR is unlikely to be directly involved in psoriasis development.

### REFERENCES

1. Asumalahti, K., Laitinen, T., Itkonen-Vatjus, R., Lokki, M.L., Suomela, S., Snellman, E., Saarialho-Kere, U. and Kere, J. 2000. A candidate gene for psoriasis near HLA-C, HCR (Pg8), is highly polymorphic with a disease-associated susceptibility allele. *Hum. Mol. Genet.* 9: 1533-1542.
2. O'Brien, K.P., Holm, S.J., Nilsson, S., Carlén, L., Rosenmüller, T., Enerbäck, C., Inerot, A. and Stahle-Bäckdahl, M. 2001. The HCR gene on 6p21 is unlikely to be a psoriasis susceptibility gene. *J. Invest. Dermatol.* 116: 750-754.
3. Asumalahti, K., Veal, C., Laitinen, T., Suomela, S., Allen, M., Elomaa, O., Moser, M., de Cid, R., Ripatti, S., Vorechovsky, I., Marcusson, J.A., Nakagawa, H., Lazaro, C., Estivill, X., Capon, F., Novelli, G., Saarialho-Kere, U., Barker, J., Trembath, R. and Kere, J. 2002. Coding haplotype analysis supports HCR as the putative susceptibility gene for psoriasis at the MHC PSORS1 locus. *Hum. Mol. Genet.* 11: 589-597.
4. Suomela, S., Elomaa, O., Asumalahti, K., Kariniemi, A.L., Karvonen, S.L., Peltonen, J., Kere, J. and Saarialho-Kere, U. 2003. HCR, a candidate gene for psoriasis, is expressed differently in psoriasis and other hyperproliferative skin disorders and is downregulated by interferon- $\gamma$  in keratinocytes. *J. Invest. Dermatol.* 121: 1360-1364.
5. Chang, Y.T., Shiao, Y.M., Chin, P.J., Liu, Y.L., Chou, F.C., Wu, S., Lin, Y.F., Li, L.H., Lin, M.W., Liu, H.N. and Tsai, S.F. 2004. Genetic polymorphisms of the HCR gene and a genomic segment in close proximity to HLA-C are associated with patients with psoriasis in Taiwan. *Br. J. Dermatol.* 150: 1104-1111.
6. Kere, J. 2005. Mapping and identifying genes for asthma and psoriasis. *Philos. Trans. R. Soc. Lond., B, Biol. Sci.* 360: 1551-1561.

### CHROMOSOMAL LOCATION

Genetic locus: CCHCR1 (human) mapping to 6p21.33; Cchcr1 (mouse) mapping to 17 B1.

### RESEARCH USE

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

### SOURCE

HCR (H-300) is a rabbit polyclonal antibody raised against amino acids 361-660 mapping within an internal region of HCR of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

HCR (H-300) is recommended for detection of HCR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for HCR siRNA (h): sc-62447, HCR siRNA (m): sc-62448, HCR shRNA Plasmid (h): sc-62447-SH, HCR shRNA Plasmid (m): sc-62448-SH, HCR shRNA (h) Lentiviral Particles: sc-62447-V and HCR shRNA (m) Lentiviral Particles: sc-62448-V.

Molecular Weight of HCR isoforms 1/2: 86/99 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



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