SANTA CRUZ BIOTECHNOLOGY, INC.

Herc2 (A-5): sc-515891

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). Herc2 (hect domain and RLD 2), also known as jdf2, p528 or SHEP1, is a 4,834 amino acid protein that contains a variety of functional domains, including WD repeats, RCC1 repeats, HECT domains and ZZ-type zinc fingers. Involved in the pathway of protein modification, Herc2 is thought to function as an E3 ubiquitin-protein ligase that accepts ubiquitin (in the form of a thioester) from an E2 ubiquitin-conjugating enzyme and transfers that ubiquitin residue to substrates targeted for degradation. Variations in the Herc2 gene are associated with skin/hair/eye pigmentation variability type 1 (SHEP1), a allelic modification that affects hair, eye and skin color.

REFERENCES

1. Ji, Y., et al. 2000. Structure of the highly conserved Herc2 gene and of multiple partially duplicated paralogs in human. Genome Res. 10: 319-329.
2. Kayser, M., et al. 2008. Three genome-wide association studies and a linkage analysis identify Herc2 as a human iris color gene. Am. J. Hum. Genet. 82: 411-423.
3. Sturm, R.A., et al. 2008. A single SNP in an evolutionary conserved region within intron 86 of the Herc2 gene determines human blue-brown eye color. Am. J. Hum. Genet. 82: 424-431.
4. Eiberg, H., et al. 2008. Blue eye color in humans may be caused by a perfectly associated founder mutation in a regulatory element located within the Herc2 gene inhibiting OCA2 expression. Hum. Genet. 123: 177-187.
5. Shekar, S.N., et al. 2008. Linkage and association analysis of spectrophotometrically quantified hair color in Australian adolescents: the effect of OCA2 and Herc2. J. Invest. Dermatol. 128: 2807-2814.

CHROMOSOMAL LOCATION

Genetic locus: HERC2 (human) mapping to 15q13.1.

SOURCE

Herc2 (A-5) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Herc2 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.

Herc2 (A-5) is available conjugated to agarose (sc-515891 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515891 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515891 PE), fluorescein (sc-515891 FITC), Alexa Fluor® 488 (sc-515891 AF488), Alexa Fluor® 546 (sc-515891 AF546), Alexa Fluor® 594 (sc-515891 AF594) or Alexa Fluor® 647 (sc-515891 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515891 AF680) or Alexa Fluor® 790 (sc-515891 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Herc2 (A-5) is recommended for detection of Herc2 of 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 Herc2 siRNA (h): sc-89942, Herc2 shRNA Plasmid (h): sc-89942-SH and Herc2 shRNA (h) Lentiviral Particles: sc-89942-V.

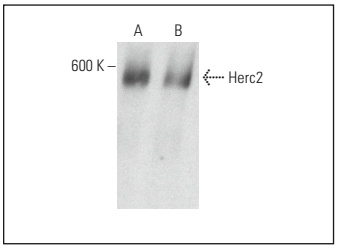
Molecular Weight of Herc2: 527 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, IMR-32 cell lysate: sc-2409 or HEL 92.1.7 cell lysate: sc-2270.

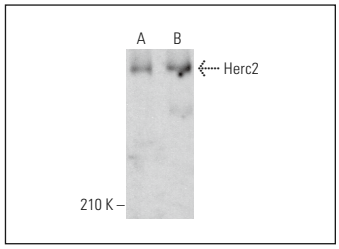
RECOMMENDED SUPPORT REAGENTS

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



Herc2 (A-5): sc-515891. Western blot analysis of Herc2 expression in IMR-32 (**A**) and ME-180 (**B**) whole cell lysates.



Herc2 (A-5): sc-515891. Western blot analysis of Herc2 expression in HEL 92.1.7 (**A**) and K-562 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Liu, Y., et al. 2023. Herc2 promotes inflammation-driven cancer stemness and immune evasion in hepatocellular carcinoma by activating Stat3 pathway. J. Exp. Clin. Cancer Res. 42: 38.

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.