

# hlws1 (D-14): sc-168086

## BACKGROUND

Hlws1 (protein IWS1 homolog), also known as IWS1L, is an 819 amino acid nuclear protein that contains one TFIIIS N-terminal domain. Belonging to the IWS1 family, hlws1 exists as three alternatively spliced isoforms, which are encoded by a gene mapping to human chromosome 2q14.3. Chromosome 2 is the second largest human chromosome, consisting of 237 million bases, encoding over 1,400 genes and making up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome, is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

## REFERENCES

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- Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
- Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the Sitosterolemia locus. *Cytogenet. Cell Genet.* 92: 204-208.
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- Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.
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## CHROMOSOMAL LOCATION

Genetic locus: IWS1 (human) mapping to 2q14.3; lws1 (mouse) mapping to 18 B1.

## SOURCE

hlws1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of hlws1 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168086 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

hlws1 (D-14) is recommended for detection of hlws1 of human origin and lws1 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

hlws1 (D-14) is also recommended for detection of hlws1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for hlws1 siRNA (h): sc-94726, lws1 siRNA (m): sc-146314, hlws1 shRNA Plasmid (h): sc-94726-SH, lws1 shRNA Plasmid (m): sc-146314-SH, hlws1 shRNA (h) Lentiviral Particles: sc-94726-V and lws1 shRNA (m) Lentiviral Particles: sc-146314-V.

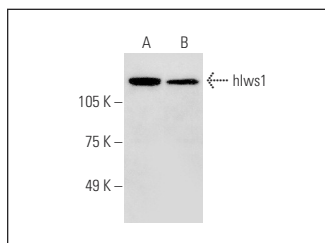
Molecular Weight of hlws1 isoforms 1/2/3: 92/56/69 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



hlws1 (D-14): sc-168086. Western blot analysis of hlws1 expression in ARPE-19 (A) and NIH/3T3 (B) whole cell lysates.

## RESEARCH USE

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