

# hemicentin-1 (E-13): sc-162931

## BACKGROUND

First discovered in *C. elegans*, Hemicentins are extracellular matrix (ECM) proteins that contain a single von Willebrand A domain at the amino terminus, more than 40 tandem immunoglobulin domains, multiple tandem epidermal growth factors, and a single fibulin-like carboxy-terminal module. In mammals, Hemicentins are expressed in the ECM of eye, skin and tongue epithelium and in the ECM of some blood vessels. Due to the expression pattern in areas that are subject to a significant amount of stress, it is thought that hemicentins likely play a role in the architecture of flexible and adhesive cell junctions. Hemicentin-1, also known as Fibulin-6, is a 5,635 amino acid secreted protein that is specifically expressed in skin fibroblasts and retinal pigment epithelium cells. Defects in the gene encoding hemicentin-1 results in age-related macular degeneration type I, the most common cause of irreversible vision loss in the developed world. There are three isoforms of hemicentin-1 that are produced as a result of alternative splicing events.

## REFERENCES

1. Klein, M.L., et al. 1998. Age-related macular degeneration. Clinical features in a large family and linkage to chromosome 1q. *Arch. Ophthalmol.* 116: 1082-1088.
2. Vogel, B.E., et al. 2001. Hemicentin, a conserved extracellular member of the immunoglobulin superfamily, organizes epithelial and other cell attachments into oriented line-shaped junctions. *Development* 128: 883-894.
3. Schultz, D.W., et al. 2003. Analysis of the ARMD1 locus: evidence that a mutation in HEMICENTIN-1 is associated with age-related macular degeneration in a large family. *Hum. Mol. Genet.* 12: 3315-3323.
4. Schultz, D.W., et al. 2005. HEMICENTIN-1 (FIBULIN-6) and the 1q31 AMD locus in the context of complex disease: review and perspective. *Ophthalmic Genet.* 26: 101-105.
5. Bojanowski, C.M., et al. 2005. Analysis of Hemicentin-1, hOgg1, and E-selectin single nucleotide polymorphisms in age-related macular degeneration. *Trans. Am. Ophthalmol. Soc.* 103: 37-44; discussion 44-45.

## CHROMOSOMAL LOCATION

Genetic locus: HMCN1 (human) mapping to 1q25.3; Hmcn1 (mouse) mapping to 1 G1.

## SOURCE

hemicentin-1 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of hemicentin-1 of human origin.

## 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-162931 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

hemicentin-1 (E-13) is recommended for detection of hemicentin-1 of mouse, rat and human 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); non cross-reactive with hemicentin-2.

hemicentin-1 (E-13) is also recommended for detection of hemicentin-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for hemicentin-1 siRNA (h): sc-88362, hemicentin-1 siRNA (m): sc-145936, hemicentin-1 shRNA Plasmid (h): sc-88362-SH, hemicentin-1 shRNA Plasmid (m): sc-145936-SH, hemicentin-1 shRNA (h) Lentiviral Particles: sc-88362-V and hemicentin-1 shRNA (m) Lentiviral Particles: sc-145936-V.

Molecular Weight of hemicentin-1 isoform 1: 613 kDa.

Molecular Weight of hemicentin-1 isoform 2: 600 kDa.

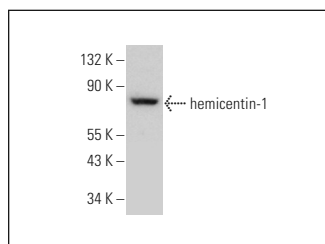
Molecular Weight of hemicentin-1 isoform 3: 60 kDa.

Positive Control: A-431 whole cell lysate: sc-2201.

## 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



hemicentin-1 (E-13): sc-162931. Western blot analysis of hemicentin-1 expression in A-431 whole cell lysate.

## 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.