

Crossveinless-2 (H-189): sc-292133

BACKGROUND

Crossveinless-2, also known as BMP-binding endothelial regulator protein, Cvl2 or Cv2, is a member of the chordin family. It is an evolutionarily conserved protein that was first identified in *Drosophila*, where it is required for the formation of cross-veins in the wing. Crossveinless-2 is a developmentally secreted glycoprotein that contains a trypsin inhibitory-like (TIL) domain, five von Willebrand factor type C (VWFC) domains and one VWF type D (VWFD) domain. Crossveinless-2 regulates BMP homeostasis in early vertebrate embryonic tissues via its cysteine-rich BMP-binding domains. It is expressed during development at sites of high BMP signaling and its expression is responsive to this signaling, thereby providing positive feedback. Crossveinless-2 directly interacts with BMP4 and BMP2 and can function either to enhance or inhibit BMP signaling. Crossveinless-2 may function to promote BMP signaling by aiding in ligand transport.

REFERENCES

- Coffinier, C., et al. 2003. Mouse Crossveinless-2 is the vertebrate homolog of a *Drosophila* extracellular regulator of BMP signaling. *Gene Expr. Patterns* 2: 189-194.
- Binnerts, M.E., et al. 2004. Human Crossveinless-2 is a novel inhibitor of bone morphogenetic proteins. *Biochem. Biophys. Res. Commun.* 315: 272-280.
- Kamimura, M., et al. 2004. Vertebrate Crossveinless-2 is secreted and acts as an extracellular modulator of the BMP signaling cascade. *Dev. Dyn.* 230: 434-445.
- Coles, E., et al. 2004. A vertebrate Crossveinless-2 homologue modulates BMP activity and neural crest cell migration. *Development* 131: 5309-5317.
- O'Connor, M.B., et al. 2005. Shaping BMP morphogen gradients in the *Drosophila* embryo and pupal wing. *Development* 133: 183-193.
- Rentsch, F., et al. 2006. Crossveinless-2 is an essential positive feedback regulator of BMP signaling during zebrafish gastrulation. *Development* 133: 801-811.

CHROMOSOMAL LOCATION

Genetic locus: BMPER (human) mapping to 7p14.3; Bmper (mouse) mapping to 9 A3.

SOURCE

Crossveinless-2 (H-189) is a rabbit polyclonal antibody raised against amino acids 497-685 mapping at the C-terminus of Crossveinless-2 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.

STORAGE

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

APPLICATIONS

Crossveinless-2 (H-189) is recommended for detection of Crossveinless-2 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).

Crossveinless-2 (H-189) is also recommended for detection of Crossveinless-2 in additional species, including canine, bovine, porcine and avian.

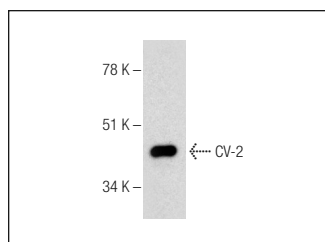
Suitable for use as control antibody for Crossveinless-2 siRNA (h): sc-72318, Crossveinless-2 siRNA (m): sc-72319, Crossveinless-2 shRNA Plasmid (h): sc-72318-SH, Crossveinless-2 shRNA Plasmid (m): sc-72319-SH, Crossveinless-2 shRNA (h) Lentiviral Particles: sc-72318-V and Crossveinless-2 shRNA (m) Lentiviral Particles: sc-72319-V.

Molecular Weight of Crossveinless-2: 80 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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 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™ Mounting Medium: sc-24941.

DATA



Crossveinless-2 (H-189): sc-292133. Western blot analysis of human recombinant CV-2.

RESEARCH USE

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



Try **Crossveinless-2 (G-8): sc-377502**, our highly recommended monoclonal alternative to Crossveinless-2 (H-189).