

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Crossveinless-2/CV-2 in direct ELISAs and Western blots. In these formats, approximately 10% cross-reactivity with recombinant mouse CV-2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Crossveinless-2/CV-2 (R&D Systems, Catalog # 1956-CV) Val34-Arg685 Accession # Q8N8U9
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Crossveinless-2 (CV-2), also known as bone morphogenetic protein-binding endothelial cell precursor-derived regulator (BMPER), is a secreted chordin-like protein that modulates the BMP signaling pathway (1-3). Human CV-2 is synthesized as a 685 amino acid (aa) residue precursor protein with a putative 39 aa signal peptide, five tandem chordin-like cysteine-rich (CR) domains, a partial von Willebrand factor type D domain (vWD), and a carboxyl trypsin inhibitor-like cysteine-rich domain (TIL) (1, 4). Secreted CV-2 is reported to be proteolytically cleaved to generate two fragments that are disulfide-linked (1, 2). The GDPH sequence is conserved in CV-2 from other species. It is also found in multiple proteins that undergo a similar type of cleavage (5). Human CV-2 message is detected in many tissues, with the highest expression detected in adult brain and adult and fetal lung (1). It is also expressed in flk-1⁺ endothelial cell precursors and in primary chondrocytes (2). During embryonic development, CV-2 is expressed in regions of high BMP signaling, such as the posterior primitive streak and the ventral tail bud (4). Human CV-2 shares 92% and 34% aa sequence identity with the mouse and *Drosophila* homologs, respectively (1, 4). Results from biochemical experiments using recombinant CV-2 show that CV-2 directly interacts with BMP-2, -4, and -6 to antagonize BMP signaling, which can regulate a wide range of differentiation processes (1, 2). In contrast, genetic data from *Drosophila* suggest that CV-2 potentiates BMP-signaling (6). It is possible that like TSG, CV-2 can positively and negatively modulate BMP signal transduction depending on the cell context (7).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.