



# Recombinant Human Complement component C1q receptor (CD93), partial (Active)

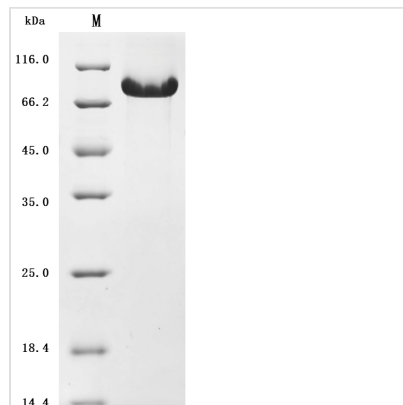
|                            |   |
|----------------------------|---|
| <b>Product Code</b>        | CSB-MP865099HU  |
| <b>Abbreviation</b>        | Recombinant Human CD93 protein, partial (Active)  |
| <b>Storage</b>             | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.   |
| <b>Uniprot No.</b>         | Q9NPY3  |
| <b>Form</b>                | Lyophilized powder  |
| <b>Storage Buffer</b>      | Lyophilized from a 0.2 µm filtered 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0   |
| <b>Product Type</b>        | Recombinant Protein   |
| <b>Immunogen Species</b>   | Homo sapiens (Human)  |
| <b>Biological Activity</b> | Measured by its binding ability in a functional ELISA. Immobilized Human CD93 at 2 µg/mL can bind Human IGFBP7 (CSB-MP620956HUd9), the EC <sub>50</sub> is 20.34-26.92 ng/mL. Measured by its binding ability in a functional ELISA. Immobilized Human CD93 at 2 µg/mL can bind Anti-CD93 recombinant antibody (CSB-RA865099MA1HU), the EC <sub>50</sub> is 0.6639-1.173 ng/mL.   |
| <b>Purity</b>              | Greater than 90% as determined by SDS-PAGE.<br>Greater than 90% as determined by SEC-HPLC.  |
| <b>Sequence</b>            | TGADTEAVVCVGTACYTAHSGKLSAAEAQNHCHNQNNGGNLATVKSKEEAQHV<br>QRVLAQLLRREAALTARMSKFWIGLQREKGKCLDPSLPLKGFSWVGGGEDTP<br>YSNWHKELRNISCISKRCVSLLLDLSQPLLPKRWSEGPCGSPGSPGSNIEG<br>FVCKFSFKGMCRPLALGGPGQVTYTTTFQTTSSSLEAVPFASAANVACGEDG<br>KDETQSHYFLCKEKAPDVFDFWSSGPLCVSPKYGCNFNNGGCHQDCFEGG<br>DGSFLCGCRPGFRLLDLVTCASRNPCSSSPCRGGATCVLGPBGKNYTCRC<br>PQGYQLDSSQLDCVDVDECQDSPCAQECVNTPGGFRCECWVGYEPGGPGE<br>GACQDVDECALGRSPCAQGCTNTDGSFHCSC EEGYVLAGEDGTQCQDVDE<br>CVGPGGPLCDSLCFNTQGSFHCGLPGWVLAPNGVSC TMGPVSLGPPSGPP<br>DEEDKGEKEGSTVPRAATASPTRGPEGTPKATPTTSRPSLSSDAPITSAPLKM<br>LAPSGSPGVWREPSIHATAASGPQEPAGGDSSVATQNNNDGTDGQK |
| <b>Source</b>              | Mammalian cell  |
| <b>Target Names</b>        | CD93  |
| <b>Expression Region</b>   | 22-580aa  |
| <b>Notes</b>               | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.   |
| <b>Tag Info</b>            | C-terminal 10xHis-tagged  |

**Mol. Weight**

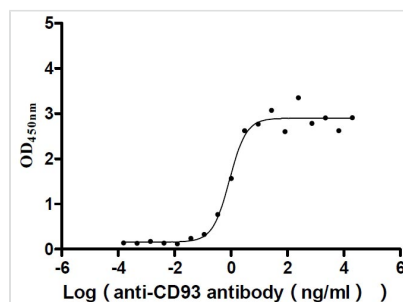
60.1 kDa

**Protein Length**

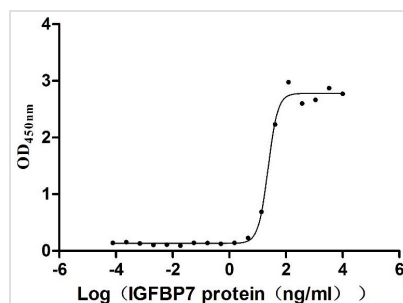
Partial

**Image**


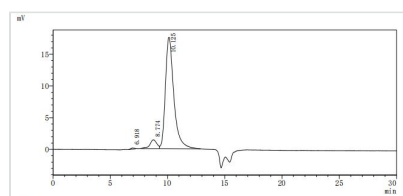
(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.


**Activity**

Measured by its binding ability in a functional ELISA. Immobilized Human CD93 at 2 µg/ml can bind Anti-CD93 recombinant antibody (CSB-RA865099MA1HU), the EC<sub>50</sub> is 0.6639-1.173 ng/mL.


**Activity**

Measured by its binding ability in a functional ELISA. Immobilized Human CD93 at 2 µg/ml can bind Human IGFBP7 (CSB-MP620956HUd9), the EC<sub>50</sub> is 20.34-26.92 ng/mL.



The purity of CD93 was greater than 90% as determined by SEC-HPLC

**Description**

CD93, also called complement component 1, q subcomponent receptor (C1qRp), is a protein found on the surface of different cell types like endothelial cells, white blood cells, and stem cells [1][2]. It's involved in lots of important jobs in the body, including helping blood vessels grow, controlling inflammation, and cleaning up dead cells [3][4][5][6][7][8][9][10][11][12]. In cancer, CD93 seems to help blood vessels form in tumors by organizing cells and structures within them [3]. It's also important in diseases like age-related macular degeneration, where it affects inflammation and blood vessel growth in the eye [8][7]. CD93



even helps clear away dead cells by shedding a part of itself, acting as a signal for other cells to come and clean up [5][12]. Plus, it's involved in the process of cells engulfing and digesting other cells, and it interacts with certain proteins to help regulate this process [11]. In development, CD93 seems to have a say in how certain cells grow and stick together [6][10]. Overall, CD93 is a potential target for treatments that aim to stop blood vessel growth in diseases like pancreatic cancer [13].

#### References:

- [1] S. Bohlson, R. Silva, M. Fonseca, & A. Tenner, "Cd93 is rapidly shed from the surface of human myeloid cells and the soluble form is detected in human plasma", *The Journal of Immunology*, vol. 175, no. 2, p. 1239-1247, 2005. <https://doi.org/10.4049/jimmunol.175.2.1239>
- [2] N. Ikewaki, J. Kulski, & H. Inoko, "Regulation of cd93 cell surface expression by protein kinase c isoenzymes", *Microbiology and Immunology*, vol. 50, no. 2, p. 93-103, 2006. <https://doi.org/10.1111/j.1348-0421.2006.tb03774.x>
- [3] R. Lugano, K. Vemuri, D. Yu, M. Bergqvist, A. Smits, M. Essandet al., "Cd93 promotes  $\beta$ 1 integrin activation and fibronectin fibrillogenesis during tumor angiogenesis", *Journal of Clinical Investigation*, vol. 128, no. 8, p. 3280-3297, 2018. <https://doi.org/10.1172/jci97459>
- [4] E. Langenkamp, L. Zhang, R. Lugano, H. Huang, T. Elhassan, M. Georganakiet al., "Elevated expression of the c-type lectin cd93 in the glioblastoma vasculature regulates cytoskeletal rearrangements that enhance vessel function and reduce host survival", *Cancer Research*, vol. 75, no. 21, p. 4504-4516, 2015. <https://doi.org/10.1158/0008-5472.can-14-3636>
- [5] J. Blackburn, D. Lau, E. Liu, J. Ellins, A. Vrieze, E. Pawlak et al., "Soluble cd93 is an apoptotic cell opsonin recognized by  $\alpha$ x $\beta$ 2", *European Journal of Immunology*, vol. 49, no. 4, p. 600-610, 2019. <https://doi.org/10.1002/eji.201847801>
- [6] Q. Liang, L. Su, D. Zhang, & J. Jiao, "Cd93 negatively regulates astrogenesis in response to mmrn2 through the transcriptional repressor zfp503 in the developing brain", *Proceedings of the National Academy of Sciences*, vol. 117, no. 17, p. 9413-9422, 2020. <https://doi.org/10.1073/pnas.1922713117>
- [7] S. Trivigno, "The c-type lectin receptor cd93 regulates platelet activation and surface expression of the protease activated receptor 4", *Thrombosis and Haemostasis*, vol. 124, no. 02, p. 122-134, 2023. <https://doi.org/10.1055/a-2166-5841>
- [8] G. Tosi, E. Caldi, B. Parolini, P. Toti, G. Neri, F. Nardiet al., "Cd93 as a potential target in neovascular age?related macular degeneration", *Journal of Cellular Physiology*, vol. 232, no. 7, p. 1767-1773, 2016. <https://doi.org/10.1002/jcp.25689>
- [9] B. Wu, L. Fu, X. Guo, H. Hu, L. Yang, Y. Shiet al., "Multi-omics profiling and digital image analysis reveal the potential prognostic and immunotherapeutic properties of cd93 in stomach adenocarcinoma", *Frontiers in Immunology*, vol. 14, 2023. <https://doi.org/10.3389/fimmu.2023.984816>
- [10] M. Zhang, S. Bohlson, M. Dy, & A. Tenner, "Modulated interaction of the erm protein, moesin, with cd93", *Immunology*, vol. 115, no. 1, p. 63-73, 2005. <https://doi.org/10.1111/j.1365-2567.2005.02120.x>
- [11] S. Bohlson, M. Zhang, C. Ortiz, & A. Tenner, "Cd93 interacts with the pdz domain-containing adaptor protein gipc: implications in the modulation of



phagocytosis", Journal of Leukocyte Biology, vol. 77, no. 1, p. 80-89, 2004.  
<https://doi.org/10.1189/jlb.0504305>

[12] B. Jw, L. Dh, J. Ellins, A. Kipp, P. En, D. Jdet al., "Soluble cd93 is an apoptotic cell opsonin recognized by the  $\alpha\beta 2$  integrin",, 2018.  
<https://doi.org/10.1101/341933>

[13] H. Zhang, Z. Dai, Y. Liao, C. Yan, B. Zhao, T. Liuet al., "Cd248(tem1/cd164l1/endosialin): a new molecular target for anti-angiogenic therapy in pancreatic ductal adenocarcinoma",, 2021.  
<https://doi.org/10.21203/rs.3.rs-217476/v1>

|                       |   |
|-----------------------|---|
| <b>Endotoxin</b>      | Less than 1.0 EU/ug as determined by LAL method.  |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference. |
| <b>Shelf Life</b>     | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.<br>Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.  |