

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Ficolin-1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 25% cross-reactivity with recombinant human (rh) Ficolin-2 is observed and less than 1% cross-reactivity with rhFicolin-3 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Ficolin-1 Gln28-Ala326 Accession # O00602
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Ficolin-1 (Catalog # 4209-FC)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human Ficolin-1 (fibrinogen/collagen-like), also called M-ficolin, is a member of the ficolin family of secreted pattern recognition proteins in the lectin complement activation pathway (1-3). Ficolin-1 is expressed by monocytes, neutrophils and type II alveolar epithelial cells (2-5). It is proposed to be a locally-acting lectin released in a regulated manner (4). Ficolin-1 is not found in plasma, but is detected on the surface of circulating monocytes (4-6). The 35 kDa, 326 amino acid (aa) human Ficolin-1 contains a 28 aa signal sequence, an N-terminal collagen domain and a C-terminal fibrinogen-like (FBG) domain that includes a calcium binding site and one potential N-glycosylation site. Both the collagen and FBG domains mediate trimer formation (7). Like Ficolin-2, larger homo-multimers of Ficolin-1 exist and are likely formed by disulfide bonds at the N-terminus. Sizes corresponding to 12 or 18 subunit oligomers are reported (4, 6, 7). The FBG domain of Ficolin-1 binds microbial ligands that contain acetylated compounds (6). Ligands identified include N-acetyl glucosamine, N-acetyl galactosamine and sialyl-N-acetyllactosamine (4-7). Like other ficolins, Ficolin-1 associates with, and activates the MBL-associated serine protease (MASP) complex, which activates the complement pathway by cleaving C4, contributing to the innate immune response (4-6). Mature human Ficolin-1 shares 76%, 61%, 61%, 76% and 81% aa identity with mouse Ficolin-2 (8), and mouse, rat, canine and porcine Ficolin-1, respectively. It shares 84% and 46% aa identity with human Ficolin-2 and Ficolin-3, respectively. The Ficolin-1 gene is polymorphic, showing at least ten single nucleotide polymorphisms in the promoter and coding regions (1).

## References:

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2. Endo, Y. *et al.* (1996) *Genomics* **36**:515.
3. Lu, J. *et al.* (1996) *Biochem. J.* **313**: 473.
4. Liu, Y. *et al.* (2005) *J. Immunol.* **175**:3150.
5. Teh, C. *et al.* (2000) *Immunology* **101**:225.
6. Frederiksen, P. D. *et al.* (2005) *Scand. J. Immunol.* **62**:462.
7. Tanio, M. *et al.* (2007) *J. Biol. Chem.* **282**:3889.
8. Endo, Y. *et al.* (2004) *Genomics* **84**:737.