

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Ficolin-1 Gln28-Ala326 Accession # O00602
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or 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
Western Blot	0.1 µg/mL	Recombinant Human Ficolin-1 (Catalog # 4209-FC)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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