

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Ficolin-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Ficolin-3 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 297018
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Ficolin-2 Leu26-Ala313 Accession # Q15485
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	1 µg/mL	Recombinant Human Ficolin-2 (Catalog # 2428-FC) under non-reducing conditions only

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> ● 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-2 (fibrinogen/collagen-like; previously called L-ficolin or ficolin-B) is a member of the ficolin family of secreted pattern recognition proteins that participate in the lectin complement activation pathway (1-4). Ficolin-2 is expressed in the liver and released into the circulation (2). The 35-40 kDa, 313 amino acid (aa) human Ficolin-2 contains a 25 aa signal sequence, an N-terminal collagen domain and a C-terminal fibrinogen-like domain that includes a calcium binding site and two potential N-glycosylation sites. The collagen domain mediates trimer formation. Larger homo-multimers are formed by disulfide links at the N-terminus, the most prominent of which is a 12 subunit oligomer (3, 5). Ficolin-2 binds microbial ligands that contain acetylated compounds (6). Notably, this includes N-acetyl glucosamine in compounds such as lipoteichoic acid in gram-positive bacteria. It also binds fungal 1,3-β-D-glucan (4, 7, 8). Pathogen recognition by Ficolin-2 initiates an immune response that involves calcium-dependent interaction of Ficolin-2 with the MBL-associated serine protease (MASP) complex. This complex cleaves C4 to activate the complement pathway (4, 7, 8). In a secondary role, Ficolin-2 is known to bind late apoptotic and necrotic cells, probably through the recognition of exposed DNA. This also activates the complement cascade that assists in clearance of cells (9, 10). Mature human Ficolin-2 shares 70%, 72%, 76% and 78% aa identity with mouse, rat, cow and pig Ficolin-2, respectively. It shares 84% and 52% aa identity with human ficolin-1 and ficolin-3, respectively. Single nucleotide polymorphisms are common in human Ficolin-2. Some affect serum concentration, while others can increase or decrease ligand binding (11).

References:

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