

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Chitinase 3-like 2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human CHIT-1 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 Chitinase 3-like 2<br>Tyr27-Leu390<br>Accession # Q15782                                                                                                                                                              |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

#### 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

Chitinase 3-like 2 (CHI3L2), also called chondrocyte protein 39 or YKL-39, is a 39 kDa potentially glycosylated member of the glycosyl hydrolase 18 family (1-3). It is secreted by synovial fibroblasts, chondrocytes, and TGFβ/IL-4-stimulated monocyte-derived macrophages (1, 4, 5). The human CHI3L2 cDNA encodes 390 amino acids (aa), including a 26 aa signal sequence and a 364 aa mature region. Potential alternate start sites at Met-24 and Met+80 would create isoforms of 413 aa and 311 aa, while a potential deletion of aa 15-24 would create a 380 aa isoform (6). Mature human CHI3L2 shares 89%, 87% and 84% aa sequence identity with bovine, porcine and equine CHI3L2, respectively. The rodent genome does not include a CHI3L2 ortholog (2). Human CHI3L1 and CHI3L2 share 43% aa sequence identity. Neither shows chitotriosidase activity, but both bind chitin and are thus termed chi-lectins (1-3). Unlike CHI3L1, CHI3L2 does not bind heparin (1). While CHI3L1 is the major protein excreted by chondrocytes, up-regulation of CHI3L2 and not CHI3L1 correlates with osteoarthritic cartilage degeneration (1, 7, 8). CHI3L2 has been proposed as a potential biomarker for osteoarthritis (4, 7, 8). CHI3L1 has been found to coordinate adhesion receptors and promote cell signaling and tumor angiogenesis; like CHI3L1, CHI3L2 can enhance cell adhesion (9).

#### PRODUCT SPECIFIC NOTICES

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