

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                    |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Dystroglycan in direct ELISAs and Western blots.                                           |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                                     |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human Dystroglycan<br>Gln28-Val749<br>Accession # Q14118 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 nm                          |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                             |
| *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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Knockout Validated</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Dystroglycan, also DAG-1 (Dystrophin-associated glycoprotein 1) is a 180-200 kDa heterodimeric adhesion molecule that links the cell cytoskeleton to the extracellular matrix. It is found on skeletal muscle, cardiac muscle, fibroblasts, smooth muscle and keratinocytes. DAG-1 binds multiple matrix molecules, including laminin-1 and -2, agrin, and perlecan. Intracellularly, the cytoplasmic tail of DAG-1 contributes to a large 400 kDa complex that interacts with the cytoskeleton. The human DAG-1 precursor is a type I transmembrane protein 895 amino acids (aa) in length. It contains a 27 aa signal sequence plus an 868 aa proform that undergoes autocatalysis to generate a 626 aa  $\alpha$ -chain (aa 28-653), and a 242 aa  $\beta$ -chain. Mature DAG-1 is a heterodimer composed of noncovalently linked  $\alpha$ - and  $\beta$ -chains. The  $\alpha$ -chain possesses one potential Ig-like domain (aa 64-162), a mucin-like region (aa 316-485), and a peptidase S72 domain (aa 500-733). It is O-glycosylated and runs from 100-160 kDa in SDS-PAGE. The  $\beta$ -chain is N-glycosylated and runs at 42-44 kDa in SDS-Page. It possesses a short 95 aa extracellular region (aa 654-749) plus a 120 aa cytoplasmic domain (aa 776-895). Membrane cleavage of the  $\beta$ -chain causes dissociation of the heterodimer and generates a 30 kDa truncated form. Over aa 28-749, human DAG-1 shares 93% aa identity with mouse DAG-1.

#### PRODUCT SPECIFIC NOTICES

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