

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Mouse/Rat                                                                                                                    |
| <b>Specificity</b>                                                                                                                                                                                      | Detects mouse and rat in Western blots.                                                                                      |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                                                         |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                                    |
| <b>Immunogen</b>                                                                                                                                                                                        | Chinese hamster ovary cell line CHO-derived recombinant mouse Integrin $\beta$ 5<br>Gly24-Asn719<br>Accession # NP_001139356 |
| <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>CyTOF-ready</b>          | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Flow Cytometry</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

The  $\beta$ 5 integrin is a 95-110 kDa member of the integrin beta chain family, integrin superfamily of molecules. It is expressed by select cell types, including microglia, keratinocytes, fibroblasts, endothelial cells, adhesive monocytes and macrophages, retinal pigment epithelium, immature dendritic cells and colonic epithelium. The Integrin  $\beta$ 5 subunit forms a noncovalent heterodimer with the  $\alpha$ v integrin subunit, and together they bind vitronectin, and the Thy-1 antigen.  $\alpha$ v $\beta$ 5 is reported to participate in phagocytosis, and act in concert with CD81, CD36 and stabilin-2 on the cell surface. When  $\alpha$ v $\beta$ 5 binds Thy-1, the heterodimer apparently interferes with cell membrane activation of TGF- $\beta$ . Intracellularly, it appears to regulate actin skeleton remodeling via focal adhesion complex formation, and may contribute to cryptic pathways associated with antigen presentation. Mature mouse Integrin  $\beta$ 5 is a 775 amino acid (aa) type I transmembrane glycoprotein that contains a 696 aa extracellular domain (ECD) (aa 24-719) and a 56 aa cytoplasmic region. The ECD contains a 243 aa vWF-A domain (aa 136-378) and a Cys-rich tandem repeat region (aa 465-630). There is one splice variant that shows a 57 aa substitution for aa 760-798. This splice form does not appear to be expressed by the human Integrin  $\beta$ 5 gene. Over aa 24-719, mouse Integrin  $\beta$ 5 shares 91% and 97% aa sequence identity with human and rat Integrin  $\beta$ 5, respectively.

## PRODUCT SPECIFIC NOTICES

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