

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse IL-20 R $\beta$ in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 30% cross-reactivity with recombinant human IL-20 R $\beta$ is observed.                                                                                |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse IL-20 R $\beta$<br>Asp14-Asn215<br>Accession # NP_001032323                                                                                                                                                           |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 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.

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| <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. |

## 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

IL-20 receptor beta (IL-20 R $\beta$ ), also known as IL-20 R2, is a type I transmembrane glycoprotein in the class II cytokine receptor family. These receptors are characterized by tandem fibronectin type III domains in their extracellular region and the lack of a WSXWS motif (1). Class II cytokine receptors form heterodimeric signaling receptor complexes that mediate class II cytokine signals. Subunits of the different receptor complexes are shared and serve multiple functions (1). Based on the structure of the human receptor, mouse IL-20 R $\beta$  should contain a 202 amino acid (aa) extracellular domain (ECD) with two fibronectin type III domains, a 16 aa transmembrane segment, and a 44 aa cytoplasmic domain (2). Within the ECD, mouse IL-20 R $\beta$  will share 81% aa sequence identity with human IL-20 R $\beta$ . It shares 18-29% aa sequence identity with the mouse class II cytokine receptors IFN- $\alpha$  R1, IFN- $\alpha$  R2, IFN- $\gamma$  R1, IFN- $\gamma$  R2, IL-10 R $\alpha$ , IL-10 R $\beta$ , IL-20 R $\alpha$ , IL-22BP, IL-22 R $\alpha$ , IL-28 R, and tissue factor. IL-20 R $\beta$  is generally expressed in psoriatic skin (keratinocytes and select endothelium), rheumatoid arthritis synovial membranes, and hepatocytes of LPS-treated mice, and it contributes to the local inflammatory reaction (3-6). IL-20 R $\beta$  heterodimerizes with IL-20 R $\alpha$  to form the receptor complex that mediates IL-19, IL-20, and IL-24 signals (3, 7-10). It also heterodimerizes with IL-22 R to form the functional receptor complex for IL-20 and IL-24 (7-9). Binding of these IL-10 family class II cytokines to their receptors induces activation of the JAK-STAT signal transduction pathway.

## PRODUCT SPECIFIC NOTICES

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