

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Activin RIB/ALK-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, shows 100% cross-reactivity with recombinant human (rh) Activin RIB, 20% cross-reactivity with rhActivin RIA, and no cross-reactivity with rhActiv                  |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 207304                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Activin RIB/ALK-4<br>Leu32-Glu126<br>Accession # NP_031421                                                                                                                                                            |
| <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

Activin RIB, also known as ALK-4, is a glycosylated 58 kDa type I transmembrane receptor that belongs to the superfamily of TGF-β serine/threonine kinase receptors. Activin RIB associates with Activin RIIB to form a receptor complex for activin and inhibin molecules (1). These ligands bind to Activin RIIB which then associates with, and phosphorylates, the cytoplasmic domain of Activin RIB to initiate signal transduction (2, 3). Mature mouse Activin RIB consists of a 103 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 356 aa cytoplasmic region that includes the kinase domain (4). Within the ECD, mouse Activin RIB shares 93% and 98% aa sequence identity with human and rat Activin RIB, respectively. It shares 23% - 38% aa sequence identity with other mouse type I receptors Activin RIA, BMPRI-IA, BMPRI-IB, and TGF-β RI. Activin receptor signaling is modulated by the direct interaction of Activin RIB with cripto or inhibin binding protein (5 - 7). Activin RIB is excluded from the signaling complex if Activin RIIB first binds inhibin and betaglycan (8). Activin RIB functions in a wide variety of growth and differentiation processes, including embryonic cell fate and axis determination, cell proliferation, apoptosis, and tumorigenesis (1, 9, 10).

## PRODUCT SPECIFIC NOTICES

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