

DESCRIPTION

Species Reactivity	Mouse
Specificity	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
Source	Monoclonal Rat IgG _{2A} Clone # 207304
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Activin RIB/ALK-4 Leu32-Glu126 Accession # NP_031421
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	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.

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, BMPR-IA, BMPR-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

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.