Mouse Activin RIB/ALK-4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1477

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Activin RIB/ALK-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human (rh) Activin RIB is observed, 5% cross-reactivity with rhActivin R1A is observed and less than 1% cross-reactivity with rhActivin RIIA and rhActivin RIIB is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Activin RIB/ALK-4 Leu32-Glu126 Accession # Q61271
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Activin RIB/ALK-4 Fc Chimera (Catalog # 1477-AR)
Immunohistochemistry	5-15 µg/mL	Immersion fixed frozen sections of mouse embryo (E13-15)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1-4 µg/mL of this antibody will block 50% of the binding of 50 ng/mL of Recombinant Mouse Cripto (Catalog # 1538-CR) to immobilized Recombinant Mouse Activin RIB/ALK-4 Fc Chimera (Catalog # 1477-AR) coated at 1 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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).

References:

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