



20180221BB

Anti-Mouse ALK4 (Activin R1B) (#8J28)

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

Cat.-no.:	103-M212
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a rat immunized with purified mouse recombinant ALK4 extracellular domain. The IgG2 fraction of the culture supernatant was purified by Protein A/G affinity chromatography.

Target Background

Synonyms (Target):	Acvr1b; Alk4; SKR2; ActR1B; ActR-1B; Acvr1k4; 6820432J04
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Activin R1B, also known as ALK4, is a glycosylated 58 kDa type I transmembrane receptor that belongs to the superfamily of TGFβ serine/threonine kinase receptors. Activin R1B associates with Activin R1B to form a receptor complex for activin and inhibin molecules. These ligands bind to Activin R1B which then associates with, and phosphorylates, the cytoplasmic domain of Activin R1B to initiate signal transduction. Mature mouse Activin R1B 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. Within the ECD, mouse Activin R1B shares 93% and 98% aa sequence identity with human and rat Activin R1B, respectively. It shares 23% 38% aa sequence identity with other mouse type I receptors Activin R1A, BMPRIA, BMPR1B, and TGFβ RI. Activin receptor signaling is modulated by the direct interaction of Activin R1B with cripto or inhibin binding protein. Activin R1B is excluded from the signaling complex if Activin R1B first binds inhibin and betaglycan (8). Activin R1B functions in a wide variety of growth and differentiation processes, including embryonic cell fate and axis determination, cell proliferation, apoptosis, and tumorigenesis.

Database References Target

Protein RefSeq:	NP_031421
Uniprot ID:	Q61271
mRNA RefSeq:	NM_007395

Product Specifications

Host	Rat
Reactivity against	Mouse
Clonality	Monoclonal Antibody
Clone	(#8J28)
Isotype	IgG2
Purification	Protein G chromatography
Antigen	recombinant mouse ALK4 extracellular domain
Formulation	lyophilized
Reconstitution buffer	PBS (sterile)

Reconstitution: Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

Remarks: This antibody was selected for its ability to detect ALK4, but not ALK2 in western blots.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

WB; IHC

Recommended usage:

WB 1:500 – 1:1000

IHC (Paraffin): 1:100-200

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

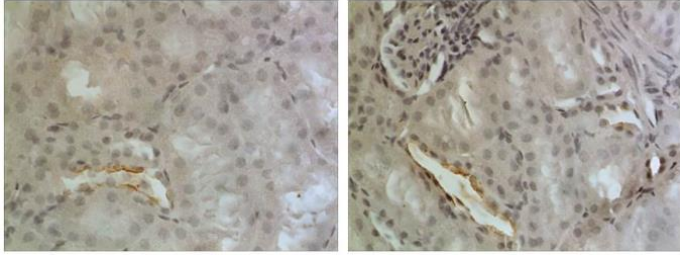


Fig. 1: The Kidney tissue samples from the Folic Acid induced kidney injury model were fixed using 4% PFA at 4C for overnight and embedded in paraffin. A 4 μ m section was subjected to IHC (1:100-200).
Antigen retrieval: PK (10 μ g/ml)