



20150119ML

Anti-Human ALK4 (Activin R1B) (#11A7)

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

Cat.-no.:	101-M175
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 mouse immunized with recombinant human ALK4 extra cellular domain. IgG1 fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Target Background

Synonyms (Target):	ACVR1B; ALK4; SKR2; ACTRIB; ACVRLK4
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Activin RIB, also known as ALK4, is a glycosylated 58 kDa type I receptor in the superfamily of TGFβ serine/threonine kinase receptors. Activin RIB associates with Activin RIIB to form a receptor complex for activin and inhibin molecules. These ligands bind to Activin RIIB which then associates with and phosphorylates the cytoplasmic domain of Activin RIB to initiate signal transduction. Mature human 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. Within the ECD, human Activin RIB shares 93% and 95% aa sequence identity with mouse and rat Activin RIB, respectively. It shares 25-35% aa sequence identity with other human type I receptors Activin RIA, Activin RIC, BMPRIA, BMPRIB, and TGFβ R1. Alternately spliced isoforms of Activin RIB have deletions in the cytoplasmic domain and function as dominant negative inhibitors of activin signaling. Activin receptor signaling is modulated by the direct interaction of Activin RIB with cripto or inhibin binding protein. Activin RIB is excluded from the signaling complex if Activin RIIB first binds inhibin and betaglycan. Activin RIB functions in a wide variety of growth and differentiation processes, including embryonic cell fate and axis determination, cell proliferation and apoptosis, and tumorigenesis.

Database References Target

Protein RefSeq:	NP_004293
Uniprot ID:	P36896
mRNA RefSeq:	NM_004302

Product Specifications

Host	Mouse
Reactivity against	Human
Clonality	Monoclonal Antibody
Clone	(#11A7)
Isotype	IgG1
Purification	Protein G chromatography
Antigen	recombinant human 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. No cross reactivity was found to ALK2 (Activin-R1A).

**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) 1:50

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



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Application/Handling

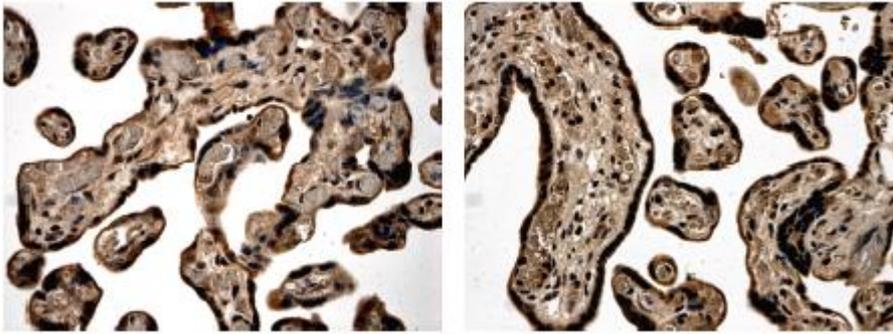


Fig. 1: Human placenta (formalin fixed and paraffin embedded) section is subjected to IHC using 101-M175.