



20180219BB

Anti-Human ALK2 (Activin R1A) (#9J17)

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

Cat.-no.:	101-M173
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 ALK2 extra cellular domain. IgG1 fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Target Background

Synonyms (Target):	ACVR1; FOP; ALK2; SKR1; TSRI; ACTRI; ACVR1A; ACVRLK2
---------------------------	--

Activin RIA, also known as ALK2, TSK7L, SKR1, TSRI, and ACTRI, is a glycosylated 65 kDa type I receptor in the TGFβ serine/threonine kinase receptor family. Binding of TGFβ superfamily ligands induces formation of a heterotetrameric complex that contains two chains each of a type I and a type II receptor in multiple combinations. The type II receptors phosphorylate the type I receptors which then phosphorylate and activate Smad signal transduction proteins. Activin RIA functions in a wide variety of growth and differentiation processes including gastrulation, skeletal system development, and cardiac morphogenesis. Mature human Activin RIA consists of a 103 aa extracellular domain (ECD), a 23 aa transmembrane segment, and a 363 aa cytoplasmic region that includes a Gly/Serrich GS box and the kinase domain. Within the ECD, human Activin RIA shares 99% and 94% aa sequence identity with mouse and rat Activin RIA, respectively. It shares 20% 26% aa sequence identity with other human type I receptors Activin RIB, BMPRIA, BMPRIB, and TGFβ RI. BMP signaling through Activin RIA is enhanced by the direct interaction between Activin RIA and RGMB/ DRAGON, a BMP coreceptor that also associates with other type I and type II receptors. Activin RIA can additionally phosphorylate the coreceptor Endoglin and is required for the inhibitory effect of Endoglin on prostate cancer cell motility.

Database References Target

Protein RefSeq:	NP_001096.1
Uniprot ID:	Q074771
mRNA RefSeq:	NM_001105

Product Specifications

Host	Mouse
Reactivity against	Human
Clonality	Monoclonal Antibody
Clone	(#9J17)
Isotype	IgG1
Purification	Protein G chromatography
Antigen	recombinant human ALK2 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 ALK2.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

WB, IHC

Recommended usage:

WB 1:100 – 1:1000 (non-reducing conditions)

IHC 1:20 -1:50

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



Anti-Human ALK2 (Activin R1A) (#9J17)

Handling/Applications

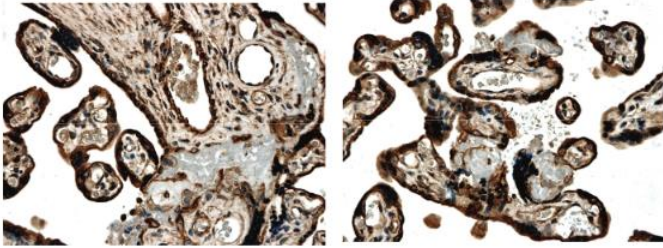


Fig. 1: Human placenta (formalin fixed and paraffin embedded) section is subjected to IHC using mouse anti-human ALK2 antibody.