



20150204ML

# Anti-Mouse ALK1 (#1B03)

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

<b>Cat.-no.:</b>	<b>103-M95</b>
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 ALK-1 extracellular domain. The IgG fraction of the culture supernatant was purified by Protein G affinity chromatography.

## Target Background

<b>Synonyms (Target):</b>	Acvrl1; Alk1; Acvrlk1; AII15505; AI427544
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Transforming Growth Factor beta (TGFβ) superfamily ligands exert their biological activities via binding to heteromeric receptor complexes of two types (I and II) of serine/threonine kinases. Type II receptors are constitutively active kinases that phosphorylate-type I receptors upon ligand binding. In turn, activated type I kinases phosphorylate downstream signaling molecules including the various smads. Transmembrane proteoglycans, including the type III receptor (betaglycan) and endoglin, can bind and present some of the TGFβ superfamily ligands to type I and II receptor complexes and enhance their cellular responses. Seven type I receptors (also termed activin receptor-like kinase (ALK)) and five type II receptors have been isolated from mammals. ALK2, 3, 4, 5, and 6 are also known as Activin R1A, BMPR1A, Activin R1B, TGFβ R1, and BMPR1B, respectively, reflecting their ligand preferences. Evidence suggests that TGFβ1, TGFβ3 and an unknown ligand present in serum can activate chimeric ALK1. ALK1 shares with other type I receptors a cysteine-rich domain with conserved cysteine spacing in the extracellular region, and a glycine and serine-rich domain (the GS domain) preceding the kinase domain. ALK1 is expressed highly in endothelial cells and other highly vascularized tissues. The expression patterns of ALK1 parallels that of endoglin. Mutations in ALK1 as well as in endoglin are associated with hereditary hemorrhagic telangiectasia (HHT), suggesting a critical role for ALK1 in the control of blood vessel development or repair. Human and mouse ALK1 share approximately 71% amino acid sequence identity in their extracellular regions.

## Database References Target

<b>Protein RefSeq:</b>	NP_033742.2
<b>Uniprot ID:</b>	Q61288
<b>mRNA RefSeq:</b>	NM_009612.2

## Product Specifications

<b>Host</b>	Rat
<b>Reactivity against</b>	Mouse
<b>Clonality</b>	Monoclonal Antibody
<b>Clone</b>	(#1B03)
<b>Isotype</b>	IgG2
<b>Label</b>	
<b>Purification</b>	Protein G chromatography
<b>Antigen</b>	human extracellular domain of ALK1
<b>Formulation</b>	lyophilized
<b>Reconstitution buffer</b>	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 recognizes mouse ALK1 in western blot. Cross reactivity to other species have not been tested!

**AVOID REPEATED FREEZE AND THAW CYCLES!**

## Applications

The antibody can be used within the following applications:

WB & IHC

**Recommended usage:**

Western Blot: 1:500 - 1:1000

Immunohistochemistry (Frozen sections): 1:50 - 1:100

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