

RPCB1224

Product Information

Product SKU:	RPCB1224	Gene ID:	29381	Size:	10µg
Tag:	C-hFc	Reactivity:	Rat		

Additional Information

Expression Host:	-	Swissprot:	P80202
Purity:	-		

Protein Information

Background: Activin RIB, also known as activin receptor type-1B (ACVR1B) or ALK-4, is a type I transmembrane serine/threonine kinase receptor that is part of the TGF- β receptor superfamily. Activin binds to a type II activin receptor (ACVR2 or ACVR2B) and then recruits ACVR1B. ALK4 is an important regulator of vertebrate development, with roles in mesoderm induction, primitive streak formation, gastrulation, dorsoanterior patterning, and left-right axis determination.

The sequence of amino acids in ALK4 (ACVR1B) proteins from different species is very stable, which leads to the conclusion that in the process of evolution, ALK4 has been only slightly altered, and that both in humans and in animals, its function is similar.

ALK4 (ACVR1B) forms an activin receptor complex with activin type-II receptor to transduce activin signal from the cell surface to the cytoplasm, thus regulating physiological and pathological processes including embryogenesis, tissue homeostasis, wound healing, extracellular matrix production, immunosuppression, and carcinogenesis. Receptor heterodimerization activates the type II receptor kinase to phosphorylate the type I receptor, which recruits and phosphorylates regulated Smads2 and 3. Phosphorylated regulated Smads are released and form a heteromeric complex with the Co-Smad, Smad4. The regulated Smad and Co-Smad complex then translocates to the nucleus where it regulates the expression of many genes. In mammals, Acvr1b is expressed by various types of epithelial cells, including

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interfollicular epidermis, and the outer root sheath (ORS) and the inner root sheath (IRS) of the hair follicles. Activin signaling through Acvr1b acts on skin epithelial cells in a paracrine manner.

- Protein Description:** High quality, high purity and low endotoxin recombinant Recombinant Rat ALK-4/ACVR1B Protein , tested reactivity in HEK293 cells and has been validated in SDS-PAGE.100% guaranteed.
- Endotoxin:** < 0.1 EU/μg of the protein by LAL method.
- Formulation:** Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
- Storage:** Store at -20°C.Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.