PRODUCT INFORMATION

ACTRIIB Rabbit Monoclonal Antibody (Clone 037)

Item No. 45590

Overview and Properties

Contents:	This vial contains 20 or 100 µl of protein A-purified monoclonal antibody
Synonyms:	Activin RIIB, Activin Receptor Type IIB, Activin Receptor Type-2B, ACVR2B, AVR2B
Immunogen:	Recombinant human ACTRIIB
Cross Reactivity:	(+) ACTRIIB
Species Reactivity:	(+) Human; other species not tested
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm-filtered solution in PBS
Clone:	037
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA; the optimal working concentration/dilution should be determined empirically.

Description

Activin receptor type IIB (ACTRIIB) is a type II activin receptor and member of the TGF-β receptor superfamily.[1,2] It is composed of an extracellular ligand-binding domain, a transmembrane domain, an intracellular kinase domain, and a C-terminal tail.[2] ACTRIIB is ubiquitously expressed in fetal development with the highest expression in the brain and spinal cord and is enriched in adult skeletal muscle.[3,4] ACTRIIB has several ligands, including activins, growth differentiation factor 8 (GDF8), also known as myostatin, and bone morphogenetic proteins (BMPs).[2] Upon ligand binding, ACTRIIB forms a complex with type I activin receptors, which results in their activation and signaling *via* the SMAD pathway. ACTRIIB is involved in hematopoiesis, myogenesis, and bone formation and resorption.[5] Mutations in the gene encoding ACTRIIB, *ACVR2B*, are associated with left-right axis malformations.[6] Cayman's ACTRIIB Rabbit Monoclonal Antibody (Clone 037) can be used for ELISA.

References

1. Attisano, L., Wrana, J.L., Montalvo, E., *et al.* Activation of signalling by the activin receptor complex. *Mol. Cell. Biol.* **16(3),** 1066-1073 (1996).
2. Leung, P.C.K. and Peng, C. Activin Receptor Signaling. *Encyclopedia of Hormones* 17-23 (2003).
3. Hildén, K., Tuuri, T., Erämaa, M., *et al.* Expression of type II activin receptor genes during differentiation of human K562 cells and cDNA cloning of the human type IIB activin receptor. *Blood* **83(8),** 2163-2170 (1994).
4. Han, H.Q., Zhou, X., Mitch, W.E., *et al.* Myostatin/activin pathway antagonism: molecular basis and therapeutic potential. *Int. J. Biochem. Cell Biol.* **45(10),** 2333-2347 (2013).
5. Lodberg, A. Principles of the activin receptor signaling pathway and its inhibition. *Cytokine Growth Factor Rev.* **60,** 1-17 (2021).
6. Kosaki, R., Gebbia, M., Kosaki, K., *et al.* Left-right axis malformations associated with mutations in *ACVR2B*, the gene for human activin receptor type IIB. *Am. J. Med. Genet.* **82(1),** 70-76 (1999).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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