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ACVR1 Antibody

ACVR1: Activin A receptor type IA, Activin receptor-like kinase 2, Activin receptor type 1A precursor, ACTR-IA, ACVRLK2, ALK2, ALK-2

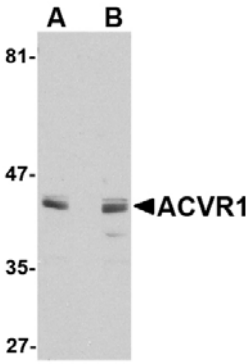
CATALOG NO.: 4791

BACKGROUND:
Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I and two type II receptors (reviewed in 1). Unlike ACVR1B and ACVR1C, ACVR1, also known as activin receptor-like kinase 2 (ALK2), can not transduce activin-mediated signaling, but will transduce BMP and Mullerian inhibiting substance (MIS) group signaling (2,3). It is thought that ACVR1 also inhibits activin signaling by blocking the binding of activin to its type II receptor (4). Recent studies indicate that genetic variation in ACVR1 is associated with polycystic ovary syndrome, suggesting that ACVR1 signaling contributes to disturbed folliculogenesis in these patients (5). At least four isoforms of ACVR1 are known to exist. This antibody is predicted to have no cross-reactivity to ACVR1B or ACVR1C.

SOURCE:
Rabbit polyclonal ACVR1 antibody was raised against a 14 amino acid peptide near the amino terminus of the human ACVR1 (GenBank accession no. NP_001096).

APPLICATION:
ACVR1 antibody can be used for detection of ACVR1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) A549 cell lysate can be used as positive control. ACVR1 antibody is human and mouse reactive. **This product is for research use only.**

STORAGE:
ACVR1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4˚C, stable for one year.



Western blot analysis of ACVR1 in A549 cell lysate with ACVR1 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.

RELATED PRODUCTS:
Blocking peptide, Catalog No. **4791P.**
A549 Cell Lysate, Catalog No. **1203.**
ACVR1B Antibody, Catalog No. **4793.**
ACVR1C Antibody, Catalog No. **4795.**

REFERENCES:
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4. Renlund N, O'Neill FH, Zhang L, et al. Activin receptor-like kinase-2 inhibits activin signaling by blocking the binding of activin to its type II receptor. *J. Endocrinol.* 2007; 195:95-103.
5. Kevenaar ME, Themmen AP, van Kirkwijk AJ, et al. Variants in the ACVR1 gene are associated with AMH levels in women with polycystic ovary syndrome. *Hum. Reprod.* 2008; epub.
(08-01D)