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#4398

ACVR1 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 57	Source/Isotype: Rabbit	UniProt ID: #Q04771	Entrez-Gene Id: 90
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
Specificity/Sensitivity	ACVR1 Antibody detects endogenous levels of total ACVR1 protein. The antibody also cross-reacts with 35 kDa and 95 kDa bands of unknown origin.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human ACVR1 protein. Antibodies were purified by protein A and peptide affinity chromatography.	
Background	The activin A receptor type 1 (ACVR1) is a membrane associated serine/threonine kinase receptor that binds activin A and related TGF-β superfamily growth factors, including bone morphogenetic protein 2 (BMP2) and BMP4, 6 and 7 (1-3). Functional activin receptors are composed of a pair of type I and type II activin receptor proteins. Following ligand binding, ACVR1 is phosphorylated by its type II binding partner, which allows recruitment and activation of receptor regulated SMAD (R-Smad) proteins (4). Phosphorylation of R-Smad proteins results in their translocation to the nucleus where R-Smads stimulate transcription of target genes (5). Mutations in the corresponding ACVR1 gene are associated with the genetic developmental disorders hereditary hemorrhagic telangiectasia and fibrodysplasia ossificans progressive (6,7).	
Background References	<ol style="list-style-type: none"> 1. Attisano, L. et al. (1993) <i>Cell</i> 75, 671-80. 2. Macías-Silva, M. et al. (1998) <i>J Biol Chem</i> 273, 25628-36. 3. Ho, C.C. and Bernard, D.J. (2009) <i>Biol Reprod</i> 81, 133-41. 4. Attisano, L. et al. (1996) <i>Mol Cell Biol</i> 16, 1066-73. 5. Attisano, L. and Wrana, J.L. (2000) <i>Curr Opin Cell Biol</i> 12, 235-43. 6. Shore, E.M. et al. (2006) <i>Nat Genet</i> 38, 525-7. 7. Letteboer, T.G. et al. (2005) <i>Hum Genet</i> 116, 8-16. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting
Cross-Reactivity Key	H: Human M: Mouse Mk: Monkey
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