

## Recombinant Human ACVR1 Protein (T172-C509), Tag Free

**Cat. No.** ACVR1-0158H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b> | Recombinant Human ACVR1(T172-C509) (Q207E) Protein was expressed in Insect cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>    | T172-C509                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description</b>      | Bone morphogenetic protein (BMP) type I receptor that is involved in a wide variety of biological processes, including bone, heart, cartilage, nervous, and reproductive system development and regulation. As a type I receptor, forms heterotetrameric receptor complexes with the type II receptors AMHR2, ACVR2A or ACVR2B. Upon binding of ligands such as BMP7 or GDF2/BMP9 to the heteromeric complexes, type II receptors transphosphorylate ACVR1 intracellular domain. In turn, ACVR1 kinase domain is activated and subsequently phosphorylates SMAD1/5/8 proteins that transduce the signal. In addition to its role in mediating BMP pathway-specific signaling, suppresses TGFbeta/activin pathway signaling by interfering with the binding of activin to its type II receptor. Besides canonical SMAD signaling, can activate non-canonical pathways such as p38 mitogen-activated protein kinases/MAPKs. |
| <b>Form</b>             | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Endotoxin</b>        | < 0.01 EU per                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|                       |                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | µg of the protein                                                                                                                                                   |
| <b>Purity</b>         | 90%                                                                                                                                                                 |
| <b>Stability</b>      | Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.                                                                           |
| <b>Storage</b>        | Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| <b>Storage Buffer</b> | Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol                                                                                               |
| <b>Shipping</b>       | It is shipped out with blue ice.                                                                                                                                    |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | ACVR1 activin A receptor, type I [ Homo sapiens (human) ]                                                                                                                                                                                                                                                                   |
| <b>Official Symbol</b> | ACVR1                                                                                                                                                                                                                                                                                                                       |
| <b>Synonyms</b>        | ACVR1; activin A receptor, type I; ACVRLK2; activin receptor type-1; ACVR1A; ALK2; SKR1; activin receptor type I; hydroxyalkyl-protein kinase; activin receptor-like kinase 2; TGF-B superfamily receptor type I; activin A receptor, type II-like kinase 2; serine/threonine-protein kinase receptor R1; FOP; TSRI; ACTRI; |
| <b>Gene ID</b>         | 90                                                                                                                                                                                                                                                                                                                          |
| <b>mRNA Refseq</b>     | NM_001105                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Refseq</b>  | NP_001096                                                                                                                                                                                                                                                                                                                   |

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| MIM | 102576 |
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| UniProt ID | Q04771 |
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