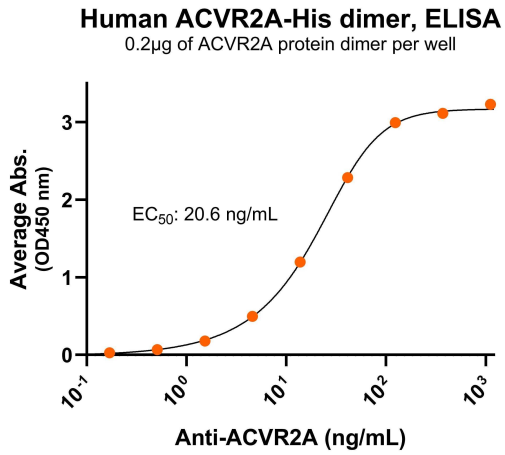
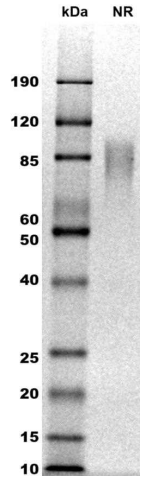
Human ACVR2A Protein Dimer, His Tag
Product Code: CSP-25144-03
For Research Use Only (RUO)

Bioactivity – Antibody Binding



Immobilized human ACVR2A protein dimer, His Tag (CSP-25144-03) at 2 μg/mL (100 μL/well) can bind anti-human ACVR2A monoclonal antibody with half maximal effective concentration (EC50) range of 10.3-41.1 ng/mL (QC tested).

SDS-PAGE



MW: Molecular Weight marker reduced condition
NR: ACVR2A dimer under non-reduced condition

The migration range of the dimer protein with glycosylation under non-reduced condition is 60-85 kDa on SDS PAGE.

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Expression Host
HEK293T

Protein Name
ACVR2A

Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Alternate Name(s)
ACTRII, ACVR2, activin A type II receptor

Protein Construct
ACVR2A dimer protein contains an ACVR2A extracellular domain (UniProt# P27037) fused with a proprietary cis-dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

Amino Acid Range
AA: A20-P135

SDS-Page Molecular Weight
43 kDa. The migration range of the dimer protein with glycosylation under non-reduced condition is 60-85 kDa on SDS PAGE.

Formulation
0.22μm filtered PBS, pH 7.4

Shipping Conditions
Frozen Dry Ice

Stability & Storage
-80^0C

Background

Human Activin receptor type-2A (ACVR2A) is a Type 1 transmembrane protein belonging to the transforming growth factor-beta (TGF-beta) superfamily of signaling proteins. ACVR2A contains an extracellular domain composed of a ligand binding domain. It is a type II serine/threonine kinase receptor and functions by binding ligands like activins, myostatin, and other TGF-β family members and forming receptor complexes activating the intracellular signaling pathway. ACVR2A interacts with inhibin beta A (INHBA) as well as myostatin, although to a lesser extent than ACVR2B. ACVR2A can form homodimers (ACVR2A–ACVR2A) or heterodimers (e.g., with ACVR2B). ACVR2A dimers are involved in regulating important biological processes such as cell growth, differentiation, development, and inflammation. Homodimerization, in particular, plays a pivotal role in the activin signaling pathway, which influences processes like tissue repair, muscle growth, and immune responses. Mutation or decreased expression of ACVR2A has been shown to play an important role in several cancers including prostate and colorectal. Therefore, a recombinant protein mimicking the ACVR2A dimer conformation can be crucial for basic and translational research as well as ACVR2A-targeting therapeutic discovery.