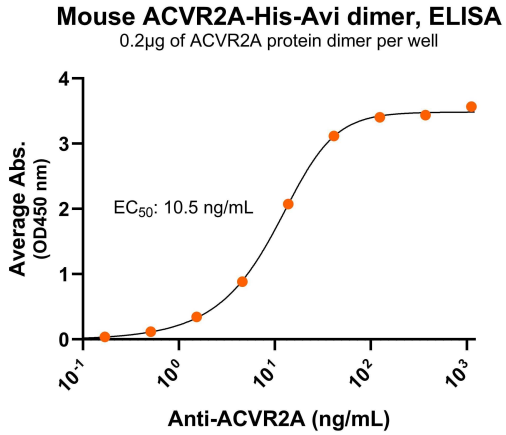
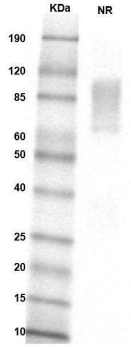
Bioactivity – Antibody Binding



Immobilized Mouse ACVR2A protein dimer, His-Avi Tag (CSP-25150-03) at 2 μg/mL (100 μL/well) can bind anti-mouse ACVR2A monoclonal antibody with half maximal effective concentration (EC50) range of 5.2-20.9 μg/mL (QC tested).

SDS-PAGE



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

The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 60 and 120 kDa on SDS PAGE.

Mouse ACVR2A Protein Dimer, His-Avi Tag
Product Code: CSP-25150-03
For Research Use Only (RUO)

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# P27038) fused with a proprietary cis-dimer motif followed by a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

Amino Acid Range
1: A20-P135

SDS-Page Molecular Weight
47 kDa. The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 60 and 120 kDa on SDS PAGE.

Formulation
0.22μm filtered PBS, pH 7.4

Shipping Conditions
Frozen Dry Ice

Stability & Storage
-80^{0}C

Background

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. While structurally and functionally similar to human ACVR2A homodimer, mouse ACVR2A homodimer is a species-specific tool essential for preclinical studies, basic research, and translational research.