Data Sheet (Cat.No.TMPY-01293)

TargetMol

ALK-4/ACVR1B Protein, Human, Recombinant (His)

General Information

Synonyms: ACTRIB;ALK4;SKR2;activin A receptor, type IB;ACVRLK4

Protein Construction: Ser24-Glu126

Species: Human

Expression Host: HEK293 Cells

Accession: P36896-1

Molecular Weight: 12.51 kDa (predicted); 15-25 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Human ACVR1B, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human Activin A, No Tag with an affinity constant of 18.43 nM as determined in SPR assay (Biacore T200).
Human ACVR1B, His Tag Tag immobilized on CM5 Chip can bind Human TDGF1, His Tag with an affinity constant of 0.16 μM as determined in SPR assay (Biacore T200).

Purity: > 95% as determined by Bis-Tris PAGE;
> 95% as determined by HPLC

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Activin A receptor type I (ACVR1) encodes for a bone morphogenetic protein type I receptor of the TGFβ receptor superfamily. It is involved in a wide variety of biological processes, including bone, heart, cartilage, nervous, and

reproductive system development and regulation. Moreover, ACVR1 has been extensively studied for its causal role in fibrodysplasia ossificans progressiva (FOP), a rare genetic disorder characterised by progressive heterotopic ossification. ACVR1 is linked to different pathologies, including cardiac malformations and alterations in the reproductive system.

Reference

Chen Y, et al. (2005) Developmental analysis of activin-like kinase receptor-4 (ALK4) expression in Xenopus laevis. 232(2): 393-8.J.

Massagu. (1998) TGF- SIGNAL TRANSDUCTION. Annual Review of Biochemistry. 67: 753-91.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481