Data Sheet (Cat.No.TMPY-03827)

TargetMol

ACVR2B Protein, Human/Cynomolgus, Recombinant (His)

General Information

Synonyms: activin A receptor, type IIB

Protein Construction: Ser19-Thr137

Species: Human

Expression Host: HEK293 Cells

Accession: Q13705-1

Molecular Weight: 14.75 kDa (Predicted); 25-45 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity: Immobilized Human Activin A, No Tag at 1μg/ml (100μl/well) on the plate. Dose response curve for Human Activin RIIB, His Tag with the EC50 of 21.4ng/ml determined by ELISA (QC Test).Human Activin RIIB, His Tag captured on CM5 Chip via anti-his antibody can bind Human Activin A with an affinity constant of 27.92 pM as determined in SPR assay (Biacore T200).

Purity: > 95% as determined by Tris-Bis 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

ActRIIB (activin receptor type-2B) is an activin receptor subtype constitutively expressed in the whole body, playing a role in cellular proliferation, differentiation, and metabolism. For its various physiological activities, ActRIIB interacts with activin and multiple other ligands including myostatin (MSTN), growth differentiation factor 11

(GDF11), and bone morphogenetic protein 9 (BMP9).

Reference

Kosaki R,et al.(1999) Left-right axis malformations associated with mutations in ACVR2B, the gene for human activin receptor type IIB. Am J Med Genet. 82(1):70-6.
Dupont S,et al.(2001) No evidence for linkage or for diabetes-associated mutations in the activin type 2B receptor gene (ACVR2B) in French patients with mature-onset diabetes of the young or type 2 diabetes. Diabetes 50(5): 1219-21.
Albertson RC,et al.(2005) Zebrafish acvr2a and acvr2b exhibit distinct roles in craniofacial development. Developmental dynamics 233(4): 1405-18.
Walsh S,et al.(2007) Activin-type II receptor B (ACVR2B) and follistatin haplotype associations with muscle mass and strength in humans. J Appl Physiol. 102(6):2142-8.