

Human CD247 / CD3-ZETA Protein (GST Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 13142-H09E

General Information

Gene Name Synonym:

CD3-ZETA; CD3H; CD3Q; CD3Z; IMD25; T3Z; TCRZ

Protein Construction:

A DNA sequence encoding the mature form of human CD247 (P20963-1) (Arg52-Arg164) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CD247 /GST chimera consists of 347 amino acids and has a predicted molecular mass of 40.2 kDa. It migrates as an approximately 28-43 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

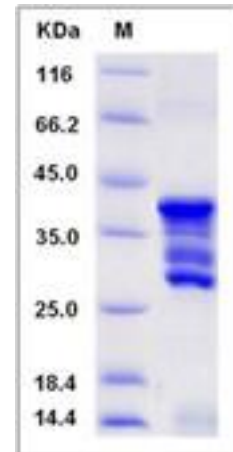
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD247, also known as CD3-ZETA, belongs to the CD3Z/FCER1G family. It contains 3 ITAM domains. As a -cell receptor zeta, CD247 forms the T-cell receptor-CD3 complex together with T-cell receptor alpha/beta and gamma/delta heterodimers, and with CD3-gamma, -delta and -epsilon. The zeta chain plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. Low expression of the antigen results in impaired immune response. Two alternatively spliced transcript variants encoding distinct isoforms have been found for CD247 gene. Defects in CD247 can cause immunodeficiency due to defect in CD3-zeta. An immunological deficiency characterized by T-cells impaired immune response to alloantigens, tetanus toxoid and mitogens. CD247 may play a role in assembly and expression of the TCR complex as well as signal transduction upon antigen triggering.

References

- 1.1. Radstake TR, *et al.* (2010) Genome-wide association study of systemic sclerosis identifies CD247 as a new susceptibility locus. *Nat Genet.* 42(5):426-9.
- 2.2. Dieud P, *et al.* (2011) Independent replication establishes the CD247 gene as a genetic systemic sclerosis susceptibility factor. *Ann Rheum Dis.* 70(9):1695-6.
- 3.3. Li R, *et al.* (2012) Association of CD247 with systemic lupus erythematosus in Asian populations. *Lupus.* 21(1):75-83.

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