

Human CD82 / KAI-1 Protein (His Tag)

Catalog Number: 12275-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

4F9; C33; GR15; IA4; KAI1; R2; SAR2; ST6; TSPAN27; AA682076; AL023070; C33; IA4; Kai1; Tspan27

Protein Construction:

A DNA sequence encoding the second extracellular domain of human CD82 (P27701-1) (Gly 111-Leu 228) was fused with a polyhistidine tag at the C-terminus and a signal peptide at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the 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: Gly 111

Molecular Mass:

The secreted recombinant human CD82 consists of 129 amino acids and has a predicted molecular mass of 15 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of the protein is approximately 25-33 kDa due to glycosylation.

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:

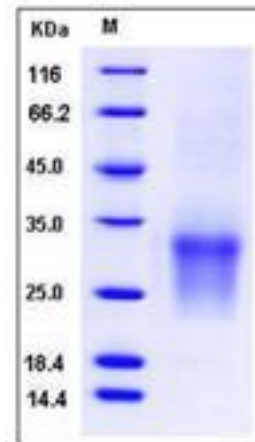
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CD82, also known as KAI-1, structurally belongs to tetraspanin family while categorised as metastasis suppressor gene on functional grounds. KAI1/CD82 is localized on cell membrane and form interactions with other tetraspanins, integrins and chemokines which are respectively responsible for cell migration, adhesion and signalling. Downregulation of CD82 expression is associated with the advanced stages of many human cancers and correlates with the acquisition of metastatic potential. Recent studies suggest that complex mechanisms underlie CD82 loss of function, including altered transcriptional regulation, splice variant production and post-translational protein modifications, and indicate a central role for CD82 in controlling metastasis as a 'molecular facilitator'. The loss of KAI1/CD82 expression in invasive and metastatic cancers is due to a complex, epigenetic mechanism that probably involves transcription factors such as NFκB, p53, and beta-catenin. A loss of KAI1 expression is also associated with the advanced stages of many human malignancies and results in the acquisition of invasive and metastatic capabilities by tumour cells. Thus, KAI1/CD82 is regarded as a wide-spectrum tumor metastasis suppressor.

References

1. Malik FA, *et al.* (2009) KAI-1/CD82, the molecule and clinical implication in cancer and cancer metastasis. *Histol Histopathol.* 24(4): 519-30.
2. Liu WM, *et al.* (2006) KAI1/CD82, a tumor metastasis suppressor. *Cancer Lett.* 240(2): 183-94.
3. Tonoli H, *et al.* (2006) CD82 metastasis suppressor gene: a potential target for new therapeutics? *Trends Mol Med.* 11(12): 563-70.

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