

Rat BCAM Protein (His Tag)

Catalog Number: 80222-R08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

BCAM

Protein Construction:

A DNA sequence encoding the rat BCAM (Q9ESS6) (Met1-Ala543) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by the ability of the immobilized protein to support the adhesion of HOS human osteogenic sarcoma cells. When cells are added to coated plates (10 µg/mL, 100 µL/well), approximately 20-50% will adhere after 1 hour at 37°C.

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: Glu 26

Molecular Mass:

The recombinant rat BCAM comprises 529 amino acids and predicts a molecular mass of 58.2 kDa. The apparent molecular mass of the recombinant protein is approximately 68 kDa in SDS-PAGE under reducing conditions 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:

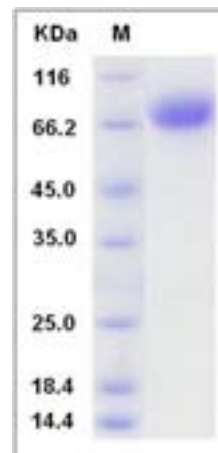
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The Lutheran (Lu) blood group and basal cell adhesion molecule (BCAM) antigens are both carried by 2 glycoprotein isoforms of the immunoglobulin superfamily representing receptors for the laminin alpha(5) chain. It is a transmembrane receptor with five immunoglobulin-like domains in its extracellular region, and is therefore classified as a member of the immunoglobulin (Ig) gene family. In addition to red blood cells, Lu/BCAM proteins are expressed in endothelial cells of vascular capillaries and in epithelial cells of several tissues. BCAM/LU has a wide tissue distribution with a predominant expression in the basal layer of the epithelium and the endothelium of blood vessel walls. As designated as CD239 recently, BCAM and LU share a significant sequence similarity with the CD146 (MUC18) and CD166, and themselves are adhesion molecules that bind laminin with high affinity. Laminins are found in all basement membranes and are involved in cell differentiation, adhesion, migration, and proliferation. BCAM is upregulated following malignant transformation of some cell types in vivo and in vitro, thus being a candidate molecule involved in tumor progression. In addition, BCAM interacts with integrin in sickle red cells, and thus may potentially play a role in vaso-occlusive episodes.

References

1. Kikkawa Y, *et al.* (2005) Review: Lutheran/B-CAM: a laminin receptor on red blood cells and in various tissues. *Connect Tissue Res.* 46 (4-5): 193-9.
2. El Nemer W, *et al.* (2007) Endothelial Lu/BCAM glycoproteins are novel ligands for red blood cell alpha4beta1 integrin: role in adhesion of sickle red blood cells to endothelial cells. *Blood.* 109 (8): 3544-51.
3. Colin Y, *et al.* (2008) Red cell and endothelial Lu/BCAM beyond sickle cell disease. *Transfus Clin Biol.* 15 (6): 402-5.

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