

## ITGB7 Protein, Human, Recombinant (His)

## General Information

Synonyms: Gut homing receptor beta subunit; Integrin beta-7; ITGB7

Protein Construction: 20-723 aa

Species: Human

Expression Host: E. coli

Accession: P26010

Molecular Weight: 82.5 kDa (predicted)

AA Sequence:

ELDAKIPSTGDATEWRNPHLSMLGSCQPAPSCQKCILSHPSCAWCKQLNFTASGEAEARRCARREELLARGC  
PLEELEEEPRGQQEVLQDQPLSQGARGEGATQLAPQVRVRLRPGEPQQLQVRFRLRAEGYPVDLYYLMDLSYS  
MKDDLRLVRQLGHALLVRLQEVTHSVRIGFGSFVDKTVLPFVSTVPSKLRHPCPTRLERCQSPFSFHHVLSLTG  
DAQAFEREVGRQSVSGNLDSPGGFDAILQAALCQEIQGWRNVSRLLVFTSDDTFHTAGDGKLGGFMPSDG  
HCHLDSNGLYSRSTEFDYPVSVGQVAQALSAANIQPIFAVTS AALPVYQELSKLIPKSAVGESESSNVVQLIM  
DAYNSLSSTVTLEHSSLPPGVHISYEQCEGPEKREGKAEDRGQCNHVRINQTVTFWVSLQATHCLPEPHLLR  
LRALGFSEELIVELHTLDCNCSDTQPQAPHCSQGHLQCGVCSCAPGRLGRLCECSVAELSSPDLESGCRA  
PNGTGPLCSGKGCQCGRCSQSSGHLCECDDASCERHEGILCGGFGRCQCGVCHCHANRTGRACECSG  
DMDSCISPEGGLCSGHGRCKNRCQLDGYYGALCDQCPGCKTPCERHRDCAECGAFRTGPLATNCSTACA  
HTNVTLALAPILDDGWCKERTLDNQLFFFLVEDDARGTVVLRVLPQEKGDH

## QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 85% as determined by SDS-PAGE.

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

Formulation: If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

## Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized 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:

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

Integrin alpha-4/beta-7 (Peyer patches-specific homing receptor LPAM-1) is an adhesion molecule that mediates lymphocyte migration and homing to gut-associated lymphoid tissue (GALT). Integrin alpha-4/beta-7 interacts with the cell surface adhesion molecules MADCAM1 which is normally expressed by the vascular endothelium of the gastrointestinal tract. Interacts also with VCAM1 and fibronectin, an extracellular matrix component. It recognizes one or more domains within the alternatively spliced CS-1 region of fibronectin. Interactions involves the tripeptide L-D-T in MADCAM1, and L-D-V in fibronectin. Binds to HIV-1 gp120, thereby allowing the virus to enter GALT, which is thought to be the major trigger of AIDS disease. Interaction would involve a tripeptide L-D-I in HIV-1 gp120. Integrin alpha-E/beta-7 (HML-1) is a receptor for E-cadherin.

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