**Recombinant Mouse Integrin α9β1**

**Catalog Number:** 7826-A9

### DESCRIPTION

**Source**
Chinese Hamster Ovary cell line, CHO-derived

**Mouse Integrin α9**
(Tyr31-Val879)
Accession # CAC69080
His-Pro
GGGSGGGS
Acidic Tail
HHHHHH

**Mouse Integrin β1**
(Gln21-Asp728)
Accession # P09055
His-Pro
GGGSGGGS
Basic Tail

### SPECIFICATIONS

**SDS-PAGE**
120-160 kDa, reducing conditions

**Activity**
Measured by the ability of the immobilized protein to support the adhesion of CHO Chinese hamster ovary cells transfected with VCAM-1.

The ED₅₀ for this effect is typically 0.6-3 μg/mL.

**Endotoxin Level**
<0.10 EU per 1 μg of the protein by the LAL method.

**Purity**
>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation**
Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

### PREPARATION AND STORAGE

**Reconstitution**
Reconstitute at 250 μg/mL in PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  - 12 months from date of receipt, -20 to -70 °C as supplied.
  - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
  - 3 months, -20 to -70 °C under sterile conditions after reconstitution.

### BACKGROUND

Integrin α9β1 is one of twelve integrin family adhesion receptors that share the β1 (CD29) subunit (1-3). It is the non-covalent heterodimer of 150 kDa α9 and 130 kDa β1 type I transmembrane glycoprotein subunits (3). The α9 extracellular domain (ECD) contains an N-terminal β-propeller structure, followed by domains termed thig, calf-1 and calf-2 (2). The β1 ECD contains a vWFA domain, which interacts with the α9 β-propeller to form a binding domain when the dimer is in the active, extended and open conformation. The 1006 amino acid (aa) mouse α9 extracellular domain (ECD) shares 95% and 89% aa sequence identity with rat and human α9, respectively, while the 708 aa mouse β1 ECD shares 98% aa identity with rat and 93-94% with human, bovine, porcine, ovine, canine and feline β1. Each subunit has a transmembrane sequence and a short cytoplasmic tail which, for α9, contains binding sites for paxillin and SSAT (spermine/spermidine-N-acetyltransferase) (4, 5). Integrin α9β1 inhibits cell spreading via signaling through paxillin (4). SSAT interaction with α9β1 results in the transfer of α9β1 to membranes and changes in the activity of paxillin, leading to the inhibition of cell spreading. The α9β1 cytoplasmic domain contains a binding site for calpain and is phosphorylated upon integrin activation. The α9β1 cytoplasmic domain contains a polyproline motif (Pro-Gly-Pro) (2). The α9β1 cytoplasmic domain contains a polyproline motif (Pro-Gly-Pro) (2).

**References:**