



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human integrin $\alpha 5\beta 6$ Binding Protein-I
Catalog Number: VRP-2017
Manufacturer: LD Biopharma, Inc.

Introduction

Human integrin $\alpha 5\beta 6$, a member of the integrin family, is specifically expressed in many malignancies but not in normal organs. Generation of integrin $\alpha 5\beta 6$, specific binding moiety has been demonstrated potential clinical applications, such as specific human integrin $\alpha 5\beta 6$, binding peptide P2: NAVPNLRGDLQVLAQKVART, which derived from foot-and-mouth disease virus was used as radiotracer for tumor image in vivo. Using flow cytometry and ELISA assay, this P2 peptide was demonstrated to have a highly selective, inhibiting $\alpha 5\beta 6$ -ligand binding with a IC_{50} of 3 nmol/L, an activity 1,000-fold more selective for $\alpha 5\beta 6$ than for other RGD-directed integrins ($\alpha_v\beta_3$, $\alpha_v\beta_5$, and $\alpha_v\beta_1$).

A peptide of P2 NAVPNLRGDLQVLAQKVART was constructed with codon optimization gene synthesis and expressed with a human Alpha Fetal protein at N-terminal. This protein was expressed in E. coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: P2 peptide
Accession Number: None
Species: Human AFPn and foot-and-mouth disease virus derived peptide
Size: 50 μ g / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at $-80^{\circ}C$ for long term storage. Product is stable at $4^{\circ}C$ for at least 30 days.

Key References



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Kraft S, et al. *Definition of an unexpected ligand recognition motif for alphav beta6 integrin.* Journal of Biological Chemistry 274(4):1979-1985 (1999)

Applications

1. May be used for in vitro human integrin $\alpha 5 \beta 6$ mediated signal pathway for various tumor cells study with this fusion protein as either coating materials or as soluble factor.
2. Conjugation of this fusion protein to beads might be useful for affinity purification of various tumor cell derived exosome, which usually was enriched of human integrin $\alpha 5 \beta 6$.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMKNFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSGGGGSNAVPNLRGDLQVLAQKVART