

Certificate of Analysis

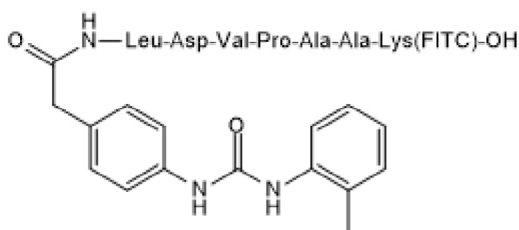
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Product Name: LDV FITC
CAS Number: 1207610-07-8

Catalog No.: 4577 **Batch No.:** 9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆₉H₈₁N₁₁O₁₇S
Batch Molecular Weight: 1368.54
Physical Appearance: Yellow lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in PBS (pH 7.4)
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 96.9% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala	2.00	1.89	Lys	1.00	0.97
Arg			Met		
Asx	1.00	0.97	Phe		
Cys			Pro	1.00	1.00
Glx			Ser		
Gly			Thr		
His			Trp		
Ile			Tyr		
Leu	1.00	0.98	Val	1.00	1.07

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel: +1 612 379 2956

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CAS Number: 1207610-07-8

Description:

LDV FITC is a fluorescent ligand that binds to the $\alpha_4\beta_1$ integrin (VLA-4) with high affinity (K_d values are 0.3 nM and 12 nM for binding to U937 cells in the presence and absence of Mn^{2+} respectively). Used to detect VLA-4 affinity and conformational changes. Wavelengths are compatible with use as an acceptor dye in TR-FRET assays, together with the CoraFluor™ 1 (Cat. No. 7920) TR-FRET donor.

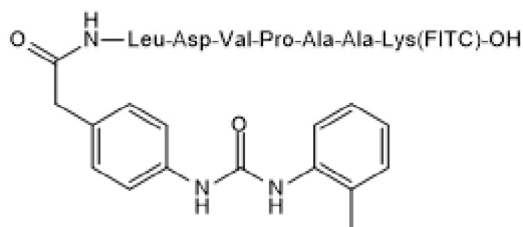
Physical and Chemical Properties:

Batch Molecular Formula: $C_{69}H_{81}N_{11}O_{17}S$

Batch Molecular Weight: 1368.54

Physical Appearance: Yellow lyophilised solid

Peptide Sequence:



Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in PBS (pH 7.4)

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Counter Ion: TFA

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μ m filter to remove potential bacterial contamination whenever possible.

References:

Njus et al (2009) Conformational mAb as a tool for integrin ligand discovery. *Assay Drug Dev. Technol.* **7** 507. PMID: 19754304.

Chigaev et al (2003) FRET detection of cellular α_4 -integrin conformational activation. *Biophys. J.* **85** 3951. PMID: 14645084.

Chigaev et al (2001) Real time analysis of the affinity regulation of alpha 4-integrin. The physiologically activated receptor is intermediate in affinity between resting and Mn^{2+} or antibody activation. *J. Biol. Chem.* **276** 48670. PMID: 11641394.

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