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## Product Data Sheet

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Product Name: Vedolizumab

Cat. No.: GC34211

### Chemical Properties

Cas. No. 943609-66-3

SMILES [Vedolizumab]

Formula M.Wt 146814.9

Solubility Soluble in DMSO Storage Store at -80°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Protocol

#### Kinase experiment:

Vedolizumab inhibition of high-affinity binding of MAdCAM-1 to human peripheral blood memory CD4+ T lymphocytes is tested. Peripheral blood (90 µL) is incubated with a saturating concentration (3 µg/mL) of MAdCAM-1-murine-Fc fusion protein and 4 mM MnCl<sub>2</sub> in a final volume of 100 µL for 1 h at room temperature, in the presence or absence of vedolizumab. After washing with assay buffer, the cells are stained with fluorescently labeled anti-mouse IgG for 15 min at room temperature. After washing again, cells are incubated with mouse serum for 10 min at room temperature, followed by staining with anti-CD4 and anti-CD45RO antibodies for 15 min at room temperature. After washing, red blood cells are lysed with BD FACS lysing solution and analyzed by flow cytometry in a FACSCalibur with CellQuest Pro software[1].

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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### References:

- [1]. Soler D, et al.  
The binding specificity and selective antagonism of vedolizumab, an anti- $\alpha 4\beta 7$  integrin therapeutic antibody in development for inflammatory bowel diseases. *J Pharmacol Exp Ther.* 2009 Sep;330(3):864-75.
- [2]. Singh H, et al.  
Vedolizumab: A novel anti-integrin drug for treatment of inflammatory bowel disease. *J Nat Sci Biol Med.* 2016 Jan-Jun;7(1):4-9.

### Background

Vedolizumab (anti- $\alpha 4\beta 7$ -integrin) is a humanized IgG1 monoclonal antibody that targets the  $\alpha 4\beta 7$  integrin for the treatment of ulcerative colitis and Crohn's disease.

Vedolizumab (anti- $\alpha 4\beta 7$ -integrin) binds to a subset of human peripheral blood memory CD4+ T lymphocytes including gut-homing interleukin 17 T-helper lymphocytes at the

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highest level, also binds to eosinophils at high levels, and to naive T-helper lymphocytes, naive and memory cytotoxic T lymphocytes, B lymphocytes, natural killer cells, and basophils at lower levels; Vedolizumab binds to memory CD4+ T and B lymphocytes with subnanomolar potency with EC50 of 0.3-0.4 nM.[1]

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