

Natalizumab

Cat. No.:	HY-108831
CAS No.:	189261-10-7
Target:	Integrin
Pathway:	Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Natalizumab is a recombinant, humanized IgG4 monoclonal antibody, binds to $\alpha 4\beta 1$ -integrin and blocks its interaction with vascular cell adhesion molecule-1 (VCAM-1). Natalizumab can be used for the treatment of relapsing remitting multiple sclerosis and Crohn's disease. Natalizumab is also the first targeted therapy which blocks an essential mechanism for lymphocyte entry to the CNS and thus prevents acute demyelinating relapses ^[1] .
IC₅₀ & Target	$\alpha 4\beta 1$
In Vitro	Natalizumab, a recombinant, humanized antibody, binds to $\alpha 4\beta 1$ -integrin and blocks its interaction with VCAM-1. As a result, leukocyte migration into brain tissue is inhibited, reducing inflammation and preventing the formation of lesions. Natalizumab may also inhibit ongoing central nervous system (CNS) inflammation, mediated by leukocytes already present in the CNS, by interrupting the interactions between $\alpha 4$ -integrin-expressing leukocytes and extracellular matrix proteins such as fibronectin and osteopontin ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Natalizumab binds rapidly and with high affinity to $\alpha 4$ -integrin. Maximal binding ($\geq 80\%$ saturation), measured in vitro on isolated lymphocyte membranes, occurred 24 hours after intravenous (IV) doses of natalizumab 1 mg/kg to 6 mg/kg ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hutchinson M. Natalizumab: A new treatment for relapsing remitting multiple sclerosis. Ther Clin Risk Manag. 2007 Jun;3(2):259-68.

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

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