Product Information

Isotype:	hIgG1/kappa
Expression System:	CHO cells
Expression Optimization:	YES
Concentration:	2 mg/mL as determined by UV280 assay
Purification:	Antibody was obtained from supernatant, one step purification by HiTrap™ ProteinA 5 mL column
Purity:	About 95% as estimated by densitometric analysis of the Coomassie Blue-stained SDS-PAGE gel
Storage and Handling:	Store at -80°C. Aliquots should be stored at the same temperature after first use to avoid multiple freeze-thaws
Storage Buffer:	DPBS, pH7.2

Experimental Results

The recombinant plasmids encoding heavy chain and light chain of GRE1 was transiently transfected into suspension CHO cell cultures. The target antibody was captured from the cell culture supernatant by HiTrap™ ProteinA 5 mL column and followed by buffer exchange. The purified protein was analyzed by SDS-PAGE and Western blot as shown in Figure 1. 5 μg of sample was loaded on SDS-PAGE and 0.3 μg of total protein was loaded on Western blot. The primary antibody for Western blot was Goat Anti-Human IgG–HRP (GenScript, Cat No.A00166).

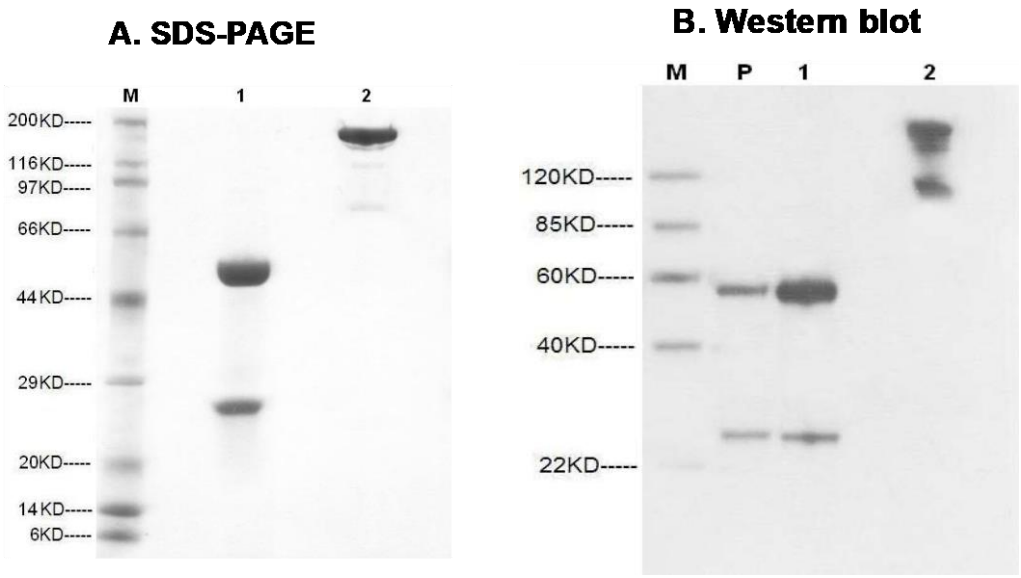

Figure 1. SDS-PAGE and Western blot of GRE1

Lane M: Protein Marker
Lane 1: Reducing conditions
Lane 2: Non-reducing conditions
Lane P: Human IgG1, Kappa (Sigma, Cat.No.I5154) as positive control

Biological Activity

GRE1 Binding affinity (JCV/VP1 VLP wt): Kd= 1.4 10^{-9} M for IgG GRE1

GRE1 Binding affinity (JCV/VP1 VLP L55F): Kd= 9.82 10^{-9} M for IgG GRE1

GRE1 Binding affinity (JCV/VP1 VLP K60E): Kd= 2.74 10^{-9} M for IgG GRE1

GRE1 Binding affinity (JCV/VP1 VLP S269F): Kd= 1.83 10^{-8} M for IgG GRE1

GRE1 Neutralizing activity (JCV strain Mad-4): IC_{50} = 0.001 µg/mL

in vitro **neutralizing activity** against **genotypes 1a, 2a and 3b pseudoviruses**

Publications

DOI: 10.1016/j.antiviral.2014.05.017: Cloning of the first human anti-JCPyV/VP1 neutralizing monoclonal antibody: epitope definition and implications in risk stratification of patients under natalizumab therapy

DOI: 10.3390/v8050128: Divergent Trends of Anti-JCPyV Serum Reactivity and Neutralizing Activity in Multiple Sclerosis (MS) Patients during Treatment with Natalizumab