Supplementary Information (SI) for Analytical Methods.
This journal is © The Royal Society of Chemistry 2026

Supplementary Materials

Binding of nanobodies to inlG protein

The dot blot showed that 1mg/mL inlGNb1 had binding activity with 1mg/mL inlG. Subsequently, we conducted Western Blot validation and once again confirmed the binding activity of the two. However, in Western Blot validation, a band appeared at 25-35 kDa. Considering that the purification method of the nanobody is different from that of commercial antibodies, there may be some non-specific binding. However, the target band appeared at 90-100 kDa of the inlG+GST fusion protein, which is sufficient to prove that inlGNb1 has binding activity with inlG.

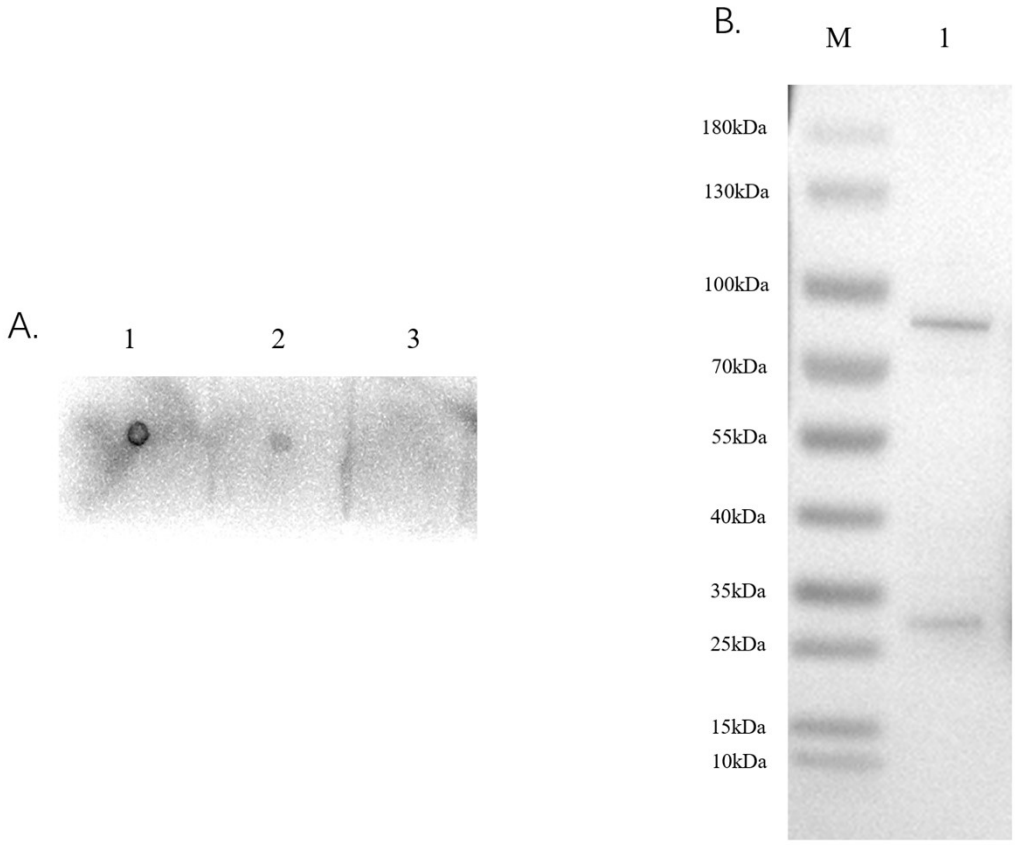

Figure1 Binding of nanobodies to inlG protein (A). Dot blot results. Lane1:1mg/mL inlG+1mg/mL inlGNb1; lane2:0.1mg/mL inlG+1mg/mL inlGNb1; lane 3: 0.01mg/mL inlG+1mg/mL inlGNb1. (B) Lane1:1mg/mL inlG+1mg/mL inlGNb1

Detection of Alpaca serum antibody titer

After five immunizations, the serum of the alpaca was diluted in multiples and tested using indirect ELISA. As shown in Figure 2A, the serum antibody titer of the alpaca had reached over 1:64000. During this period, we isolated peripheral blood lymphocytes from the alpaca and constructed a nanobody library.

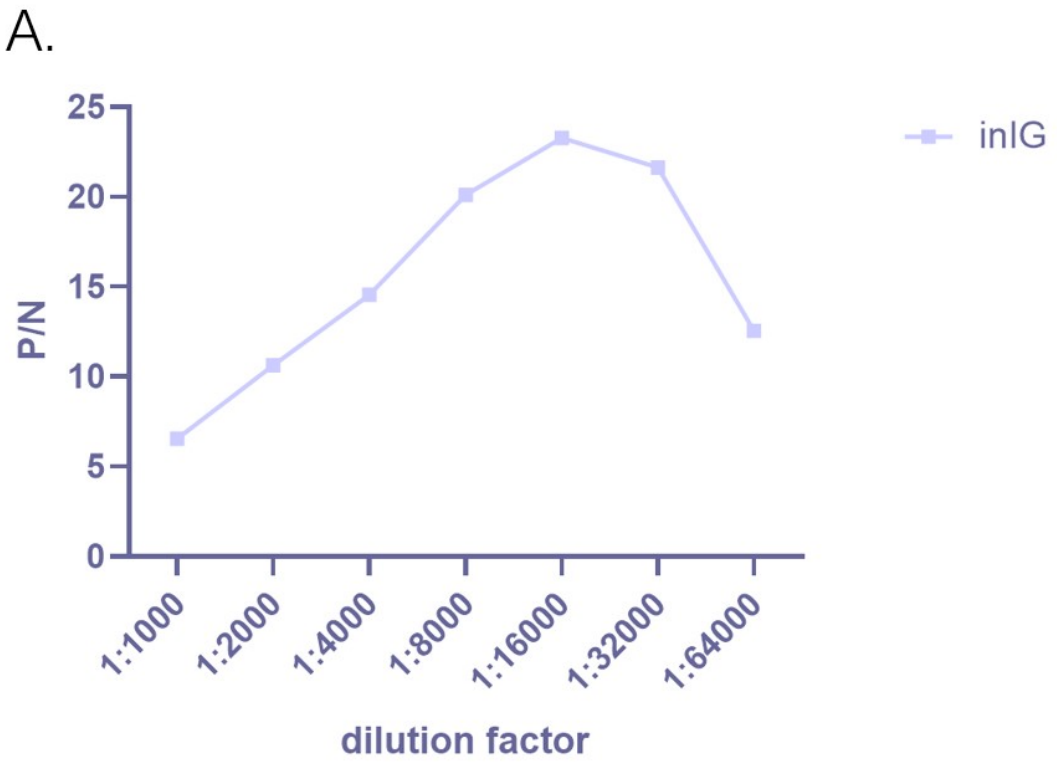

Figure2 Camelid serum antibody titer.