

# Llama IgG Fc Fusion Protein

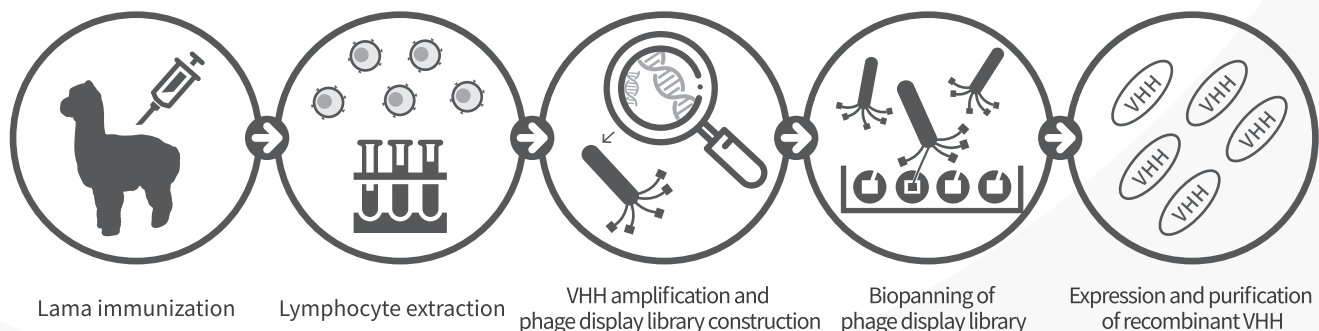
## - uniquely designed for llama immunization

The single domain antibody was originally discovered in camels back in 1993. This new class of antibody is heavy chain only, containing a single variable domain (VHH) and two constant domains (CH2, CH3). This rare form of antibody has following unique advantages, which makes it an intriguing alternative to the conventional antibodies when it comes to therapeutic use.

First, because of its small size, these nanobodies are known to be able to reach to the cryptic epitopes of the targets normally not accessible by the much larger traditional antibodies. The stability of these antibodies is much better than the traditional antibodies, which makes it possible to be delivered through oral and maybe ocular routes, in addition to intravenous and subcutaneous injection. The nanobodies can also be easily conjugated with cell-killing agents if needed. Last but not least, from manufacturing standpoint, nanobodies are much easier to produce from a variety of hosts.

In October 2017, Belgium-based pharmaceutical company Ablynx reported positive results for its first-in-class nanobody drug caplacizumab from a phase III trial on acquired thrombotic thrombocytopenic purpura (aTTP) patients. This success clearly proves the potential for nanobody drugs.

### The general process for producing VHH includes the following steps



ACROBiosystems provides a unique portfolio of llama IgG Fc tagged recombinant antigens, which are uniquely designed for llama immunization.

### Key Features

- 1 The llama IgG Fc can promote protein dimerization to enhance immunogenicity
- 2 The tag has low immunogenicity
- 3 Long half-life and good stability
- 4 High purity (Fig 1) & High activity (Fig 2)
- 5 Low endotoxin (less than 10EU/mg)

For subsequent biopanning of phage display library, we recommend the corresponding biotinylated protein, which can be coated on Streptavidin-covered surface, for rapid high-throughput screening.

## Product list of protein conjugated with llama IgG Fc tag

**Exclusive!**

Cat. No.	Molecule	Species	Structure	Size
BCA-H5259	BCMA	Human	BCMA (1-54) LlamaFc	100ug,1mg
CD9-H5250	CD19	Human	CD19 (20-291) LlamaFc	100ug,1mg
TN8-H5250	CD30	Human	CD30 (19-379) LlamaFc	100ug,1mg
CD8-H5252	CD38	Human	CD38 (43-300) LlamaFc	50ug,1mg
CD7-H5251	CD47	Human	CD47 (19-139) LlamaFc	100ug,1mg
LA3-H525c	LAG-3	Human	LAG-3 (23-450) LlamaFc	100ug,1mg
PD1-H5259	PD-1	Human	PD-1 (25-167) LlamaFc	100ug,1mg
PDL-H5250	PD-L1	Human	PD-L1 (19-238) LlamaFc	100ug,1mg
SI2-H525a	Siglec-2	Human	Siglec-2 (20-687) LlamaFc	100ug,1mg
CD3-H5259	Siglec-3	Human	Siglec-3 (18-259) LlamaFc	100ug,1mg

## Performance of protein conjugated with llama IgG Fc tag

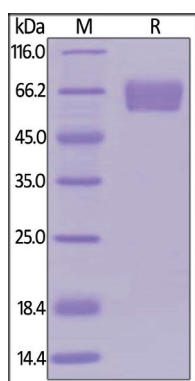


Fig 1 Human PD-1, Llama IgG2b Fc Tag, low endotoxin (Cat. No. PD1-H5259) on SDS-PAGE under reducing(R) condition. The purity of the protein is greater than 95%.

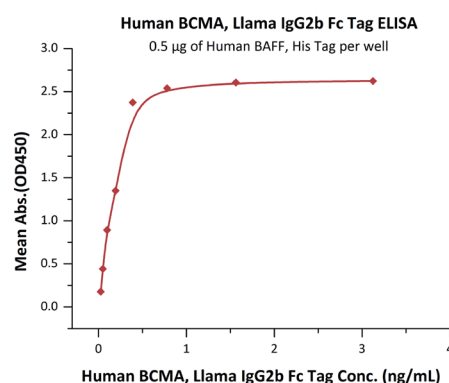


Fig 2 Immobilized Human BAFF, His Tag (Cat. No. BAF-H5248) at 5 µg/mL (100 µL/well) can bind Human BCMA, Llama IgG2b Fc Tag (Cat. No. BCA-H5259) with a linear range of 0.02-0.4ng/mL.

## Product list of recommended biotinylated protein

Cat. No.	Molecule	Species	Structure	Size
BC7-H82F0	BCMA	Human	BCMA (1-54) Fc Avi	25ug,200ug
CD0-H82E6	CD30	Human	CD30 (19-379) Avi His	25ug,200ug
CD8-H82E7	CD38	Human	CD38 (43-300) Avi His	25ug,200ug
CD7-H82E9	CD47	Human	CD47 (19-139) His Avi	25ug,200ug
LA3-H82F3	LAG-3	Human	LAG-3(23-450) mFc Avi	25ug,200ug
PD1-H82E4	PD-1	Human	PD-1 (25-167) Avi His	25ug,200ug
PD1-H82E5	PD-L1	Human	PD-L1 (19-238) Avi His	25ug,200ug
SI2-H82F8	Siglec-2	Human	Siglec-2 (20-687) Fc Avi	25ug,200ug
CD3-H82E7	Siglec-3	Human	Siglec-3 (18-259) Avi His	25ug,200ug