invenra platform

THE B-BODY BISPECIFIC PLATFORM

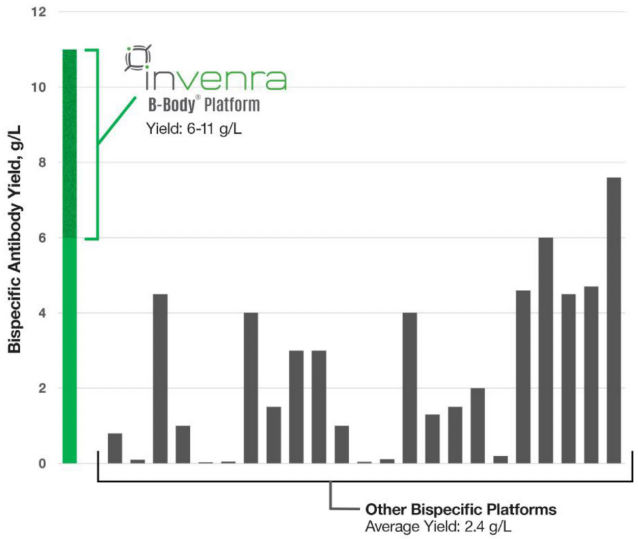
At the heart of multispecific antibody innovation lies the B-Body® Platform—a premier bispecific antibody framework engineered for exceptional yield, purity, and stability. Built entirely on a human IgG-like scaffold, the B-Body Platform addresses critical challenges in antibody discovery and manufacturing, setting new standards in the industry.

UNMATCHED BISPECIFIC YIELD AND PERFORMANCE

The B-Body Platform addresses challenges in bispecific antibody discovery and manufacturing, achieving top yields in transient and stable cell lines. Production methods, from engineered CHO pools to fed-batch, yield **6-11 g/L**—surpassing other platforms. Perfusion culture can reach **1.8 g/L/day** or higher.

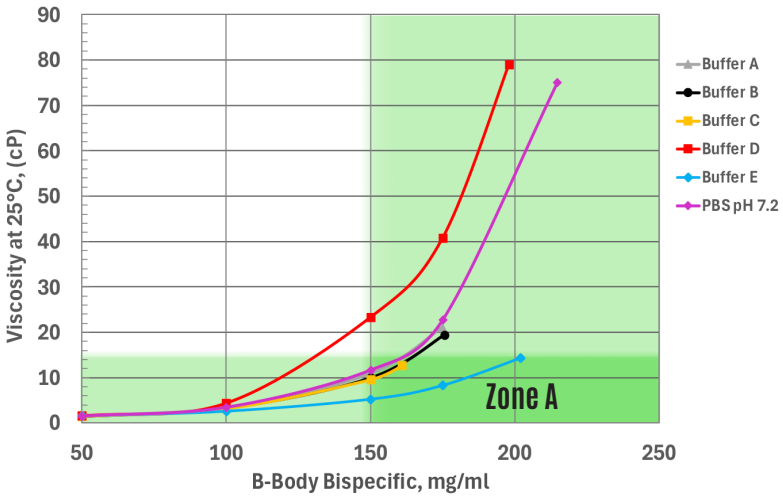
The B-Body Platform is optimized for:

- **Unmatched Bispecific Yield** – Industry-leading production efficiency
- **Validated Production** – Record yields from multiple commercial stable cell lines
- **Proper Assembly** – Optimized heterodimerization for high yield and simple CMC
- **95% Single-Pass Purity** – High puritiy possible via either CH1 or Protein A in a single pass
- **CMC Compatibility** – Human IgG-like scaffold works with standard purification methods producing high yield and 100% purity with commonly used two-column processes
- **Therapeutics Development** – High solubility, stability and low viscosity for production



SUB-Q COMPATIBILITY

B-Body Bispecifics' high solubility, stability, and low viscosity make them ideal for subcutaneous delivery. In tests, both standard and low-fucose variants reached concentrations with viscosity below Sub-Q injection and ultafiltration/diafiltration limits.



- **Sub-Q Compatible Viscosity** – **Up to 200mg/mL** or higher without exceeding viscosity limits
- **Within Range of UF/DF Production** – Sub-Q concentrations possible without exceeding UF/DF limits
- **Excellent Solubility** – Higher concentrations (**>200mg/mL**) can be achieved if required for specific applications
- **Formulation Adaptable** – Optimized antibody formulations achieve high therapeutic concentrations while maintaining viscosities suitable for sub-q delivery, meeting both key criteria (Zone A).

B-BODY: INNOVATIVE BY DESIGN

CMC DRIVEN INNOVATIONS

1 Fc Region–Clinically Validated Knobs-into-Holes

- Drives heavy chain heterodimerization

2 Fab Arm– Proprietary CH3 Domains to Drive Heterodimerization

- Substitutes for CH1/CL in one Fab Arm
- Solves light chain mispairing issue
- Novel CH3 mutations, without knobs-into-holes or charge pairs
- pI asymmetry streamlines polishing steps

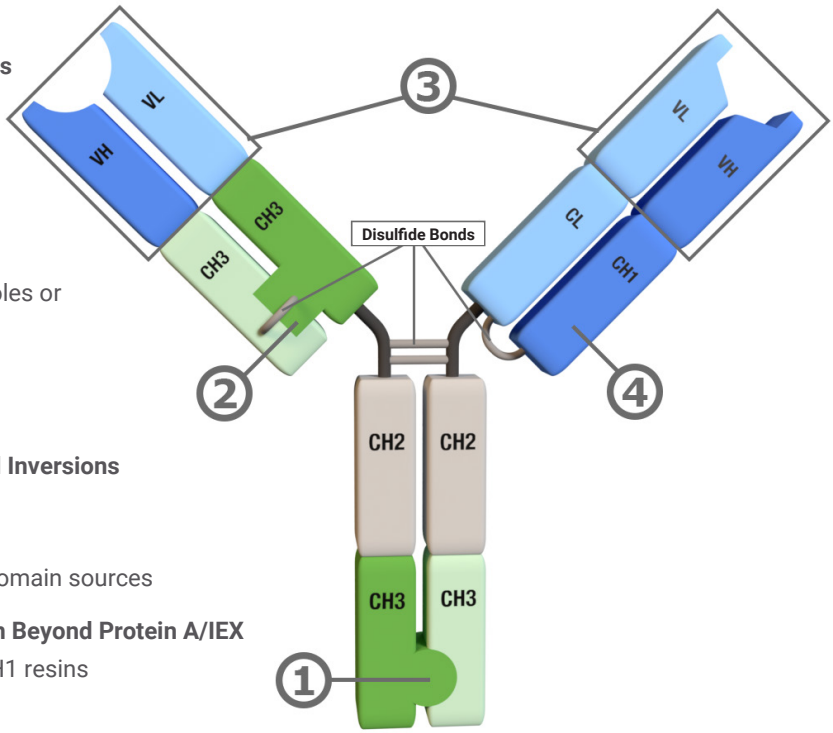
ANTIBODY DISCOVERY & CMC INNOVATIONS

3 Heavy & Light Chains– Proprietary Symmetrical Inversions

- Enhances expression yield and stability
- Facilitates one-step purification
- Compatible with a wide variety of variable domain sources

4 Sole CH1 Domain–Allows a Level of Purification Beyond Protein A/IEX

- Facilitates one-step purification with anti-CH1 resins
- Simplifies in-format discovery
- Removes homodimers and other impurities in one pass



VALIDATED PERFORMANCE: BROAD RANGE CLINICAL ANTIBODY EXPRESSION

A 15×15 matrix of clinical-stage antibodies was expressed in 1mL cultures and purified in one step with Anti-CH1 resin. Derived from a variety of heavy and light chain germlines, these bispecifics demonstrate compatibility with a broad range of antibody sources and sequences. Purity was assessed by CE, binding by Octet® BLI, and assembly by mass spec. **Over 99% of the combinations tested met purity and yield criteria** in at least one orientation, confirming the platform's broad-based performance.

Name	hVGene	lVGene	HEK Titer (mg/L)	Fab Tm DSF (°C)	SGAC-SINS AS100 (NH4)2SO4 mM	HIC Retention Time (Min)	SMAC Retention Time (Min)	Poly-Specific Reag. SMP Score (0-1)	AC-SINS* ΔΛmax (nm) Average
Adalimumab (ADA)	IGHV3-9*01	IGKV1-27*01	134.9	71.0	900.0	8.8	8.7	0.00	1.1
Atezolizumab (ATE)	IGHV3-23*04	IGKV1-NL1*01	164.1	73.5	300.0	13.4	19.3	0.07	15.0
Canakinumab (CAN)	IGHV3-33*01	IGKV6D-21*02	45.7	72.0	800.0	9.3	8.7	0.00	0.7
Daclizumab (DAC)	IGHV1-46*01	IGKV1-5*01	245.1	74.0	900.0	9.3	8.8	0.00	-0.1
Elotuzumab (ELO)	IGHV3-7*05	IGKV1-27*01	213.2	83.5	700.0	10.3	9.3	0.00	-0.2
Evolocumab (EVO)	IGHV1-18*01	IGLV2-14*01	260.7	65.0	700.0	10.4	9.1	0.20	2.2
Farletuzumab (FAR)	IGHV3-30*03	IGKV1D-33*01	220.8	75.5	800.0	9.5	9.1	0.00	-0.5
Golimumab (GOL)	IGHV3-30*01	IGKV3-11*01	163.2	70.0	0.0	11.4	12.7	0.23	23.0
Guselkumab (GUS)	IGHV5-10-1*04	IGLV1-40*01	167.3	69.5	700.0	11.4	9.2	0.47	3.4
Trastuzumab (HER)	IGHV3-11*05	IGKV1-5*05	159.5	78.5	800.0	9.7	8.8	0.00	2.0
Ipilimumab (IPI)	IGHV3-30*01	IGKV3-20*01	169.6	73.0	400.0	11.6	13.0	0.23	10.4
Ixekizumab (IXE)	IGHV1-46*01	IGKV2D-29*02	97.3	83.0	500.0	10.9	9.1	0.81	20.0
Mepolizumab (MEP)	IGHV2-70*20	IGKV4-1*02	221.5	78.5	900.0	9.2	8.8	0.00	-1.0
Ramucirumab (RAM)	IGHV3-21*01	IGKV1-12*01	90.7	66.0	900.0	9.4	8.7	0.00	0.0
Ustekinumab (UST)	IGHV5-51*01	IGKV1D-16*01	152.7	69.5	1000.0	8.8	8.6	0.15	0.4