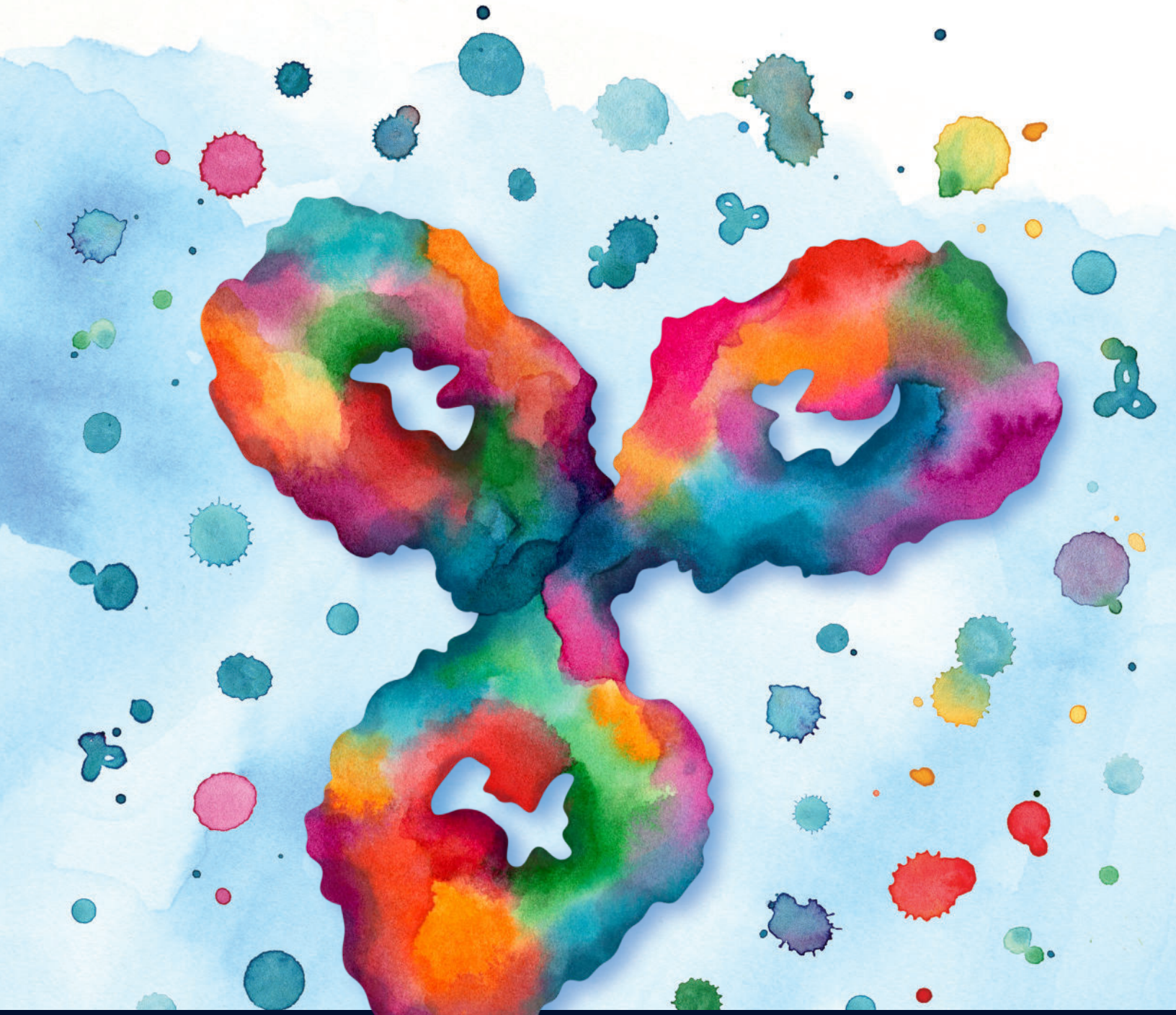


Celebrating 25 Years

Antibodies for *in vivo* Research
Since 1997

BioCell

bioxcell.com

Bio X Cell

Antibodies for *in vivo* Research Since 1997

For over 25 years, scientists have trusted Bio X Cell as their go-to source for *in vivo* functional grade antibodies. This is reflected in over 15,000 peer-reviewed publications citing Bio X Cell products. We understand this responsibility is of paramount importance and remain committed to producing antibodies of unparalleled quality and consistency, enabling our partners around the globe to accelerate research and discoveries.

> *'I am totally satisfied with the service Bio X Cell has given us. When anyone asks me for CTLA-4 antibodies, I always refer them to you. I look forward to another 20 years.'*
>
> **James P. Allison**
>
> Corecipient of the 2018 Nobel Prize in Physiology or Medicine

PRODUCT CATEGORIES

- Immune Checkpoint Blocking Antibodies
- Mouse Cell Specific Depletion Antibodies
- Cytokine Neutralizing Antibodies
- Biosimilar Antibodies
- Recombinant Antibodies
- Contract Services

PRODUCT FEATURES

- Exceptional Purity
- Pathogen Free
- Ultra-low Endotoxin Level
- Advanced Binding Validation
- Low Protein Aggregation
- Matching Isotype Control Antibodies

Featured Products

Bio X Cell antibodies are formulated for *in vivo* experiments and used extensively in animal models of human disease. They feature greater than 95% purity, ultra-low endotoxin levels, and are preservative, stabilizer, and carrier protein-free. Bio X Cell has developed a wide range of antibodies for immuno-oncology, immunology, and neuroscience research. Our products are cited in over 15,000 publications that detail a broad range of applications, including *in vivo* cell-specific depletion, cytokine neutralization, immune checkpoint blockade, and more.

Antigen		Reactivity	Application	Clone	Catalog #	Recommended Isotype Control
CD3ε	PubMed	mo	*in vivo* T cell depletion, in vitro T cell stimulation/activation, IF, FC	145-2C11	BE0001-1	BE0091
CD4	PubMed	mo	*in vivo* CD4+ T cell depletion, FC	GK1.5	BP0003-1	BP0090
CD4	PubMed	mo	*in vivo* blockade of CD4+ T-cell responses, WB	YTS 177	BE0003-3	BE0089
CD8α	PubMed	mo	*in vivo* CD8+ T cell depletion	2.43	BP0061	BP0090
CD8β (Lyt 3.2)	PubMed	mo	*in vivo* CD8+ T cell depletion, *in vitro* CD8 blockade, IF	53-5.8	BE0223	BE0088
CD16/CD32	PubMed	mo	*in vivo* Fc receptor blocking, *in vitro* Fc receptor blocking	2.4G2	BE0307	BE0090
CD40	PubMed	mo	*in vivo* CD40 activation, *in vitro* B cell stimulation/activation	FGK4.5/FGK45	BE0016-2	BE0089
CD40L (CD154)	PubMed	mo	*in vivo* blocking of CD40/CD40L signaling, *in vitro* blocking of CD40/CD40L signaling	MR-1	BE0017-1	BE0091
CD47	PubMed	hu/mo/rt	*in vivo* CD47 blockade, *in vitro* CD47 blockade, IF	MIAP410	BE0283	BE0083
CD71 (TfR1)	PubMed	mo	*in vivo* depletion of CD71+ cells	R17 217.1.3/TIB-219	BE0175	BE0089
CSF1R (CD115)	PubMed	mo	*in vivo* macrophage depletion, *in vitro* CSF-R1 neutralization, *in vivo* monocyte depletion, FC	AFS98	BE0213	BE0089
CTLA-4 (CD152)	PubMed	mo	*in vivo* CTLA-4 neutralization	9D9	BP0164	BP0086
CTLA-4 (CD152)	PubMed	mo	*in vivo* CTLA-4 neutralization, *in vitro* CTLA-4 neutralization	9H10	BP0131	BP0087
IFNAR-1	PubMed	mo	*in vivo* IFNAR-1 blockade, *in vitro* IFNAR-1 blockade	MAR1-5A3	BE0241	BE0083
IFNγ	PubMed	mo	*in vivo* IFNγ neutralization, *in vitro* IFNγ neutralization, ELISPOT, FC	XMG1.2	BE0055	BE0088
IL-10R (CD210)	PubMed	mo	*in vivo* blocking of IL-10/IL-10R signaling, *in vitro* blocking of IL-10R signaling, FC	1B1.3A	BE0050	BE0088
Ly6G	PubMed	mo	*in vivo* neutrophil depletion, *in vivo* MDSC depletion, IF, IHC-P, IHC-F, FC	1A8	BP0075-1	BP0089
Ly6G/Ly6C (Gr-1)	PubMed	mo	*in vivo* depletion of Gr-1+ myeloid cells, FC, IHC-P, IHC-F	RB6-8C5	BE0075	BE0090
NK1.1	PubMed	mo	*in vivo* NK cell depletion, FC	PK136	BE0036	BE0085
PD-1 (CD279)	PubMed	mo	*in vivo* blocking of PD-1/PD-L signaling	RMP1-14	BP0146	BP0089
PD-1 (CD279)	PubMed	mo	*in vivo* blocking of PD-1/PD-L signaling, *in vitro* PD-1 neutralization, IHC-F, FC, WB	29F.1A12	BP0273	BP0089
PD-L1 (B7-H1)	PubMed	mo	*in vivo* PD-L1 blockade, IF, IHC-F, FC	10F.9G2	BP0101	BP0090
TNFα	PubMed	mo	*in vivo* TNFα neutralization, *in vitro* TNFα neutralization	XT3.11	BE0058	BE0088
TGF-β	PubMed	hu/mo/rt	*in vivo* TGFβ neutralization, *in vitro* TGFβ neutralization	1D11.16.8	BE0057	BE0083
VEGFR-2	PubMed	mo	*in vivo* blocking of VEGF/VEGFR-2 signaling, *in vitro* blocking of VEGFR signaling	DC101	BE0060	BE0088

Biosimilar Antibodies

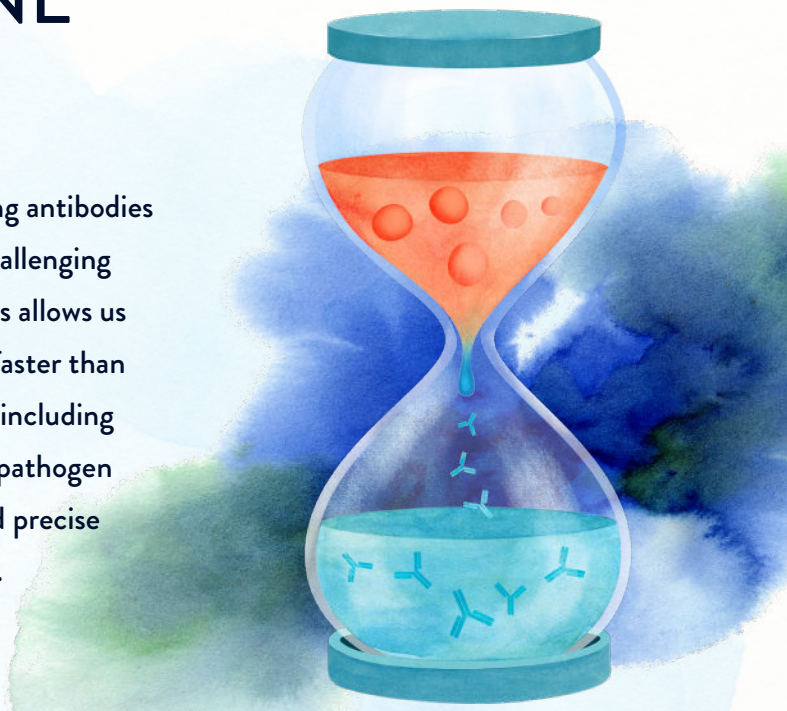
The InVivoSIM™ research-grade biosimilar antibodies have the same variable region sequences as the original therapeutic antibodies. Biosimilars make it possible to study the biological effects of a drug without the need to source an expensive pharmaceutical-grade therapeutic. They are an excellent choice for use as standard of care/therapeutic benchmarks in functional assays, pharmacokinetic assays, and *in vivo* studies in xenograft and humanized mouse models.

Product Name	Application	*InVivo*SIM™ Catalog	Recommended Isotype Control
*InVivo*SIM™ anti-human C5 (Eculizumab Biosimilar)	Inhibition of the activation of C5, Functional assays, ELISA, IP	SIM0011	BE0349
*InVivo*SIM™ anti-human CD20 (Rituximab Biosimilar)	FC, ELISA, WB	SIM0008	BP0297
*InVivo*SIM™ anti-human CTLA-4 (Ipilimumab Biosimilar)	CTLA-4 neutralization, FC, ELISA, WB	SIM0004	BP0297
*InVivo*SIM™ anti-human EGFR (Cetuximab Biosimilar)	GFR blockade, ELISA, FC	SIM0002	BP0297
*InVivo*SIM™ anti-human HER2 (Trastuzumab Biosimilar)	FC, ELISA, IHC, WB	SIM0005	BP0297
*InVivo*SIM™ anti-human IL-6R (Tocilizumab Biosimilar)	Functional assays, ELISA	SIM0014	BP0297
*InVivo*SIM™ anti-human IL-17A (Secukinumab Biosimilar)	Functional assays, ELISA, IF, IHC, FC	SIM0013	BP0297
*InVivo*SIM™ anti-human PD-1 (Nivolumab Biosimilar)	Blocking of PD-1/PD-L signaling, FC, IHC, WB	SIM0003	BE0349
*InVivo*SIM™ anti-human PD-1 (Pembrolizumab Biosimilar)	Blocking of PD-1/PD-L signaling, Functional assays	SIM0010	BE0349
*InVivo*SIM™ anti-human PD-L1 (Atezolizumab Biosimilar)	FC, WB	SIM0009	BP0297
*InVivo*SIM™ anti-human TNFα (Adalimumab Biosimilar)	TNFα neutralization, FC, ELISA, IF, IP, IHC, WB	SIM0001	BP0297
*InVivo*SIM™ anti-human TNFα (Infliximab Biosimilar)	TNFα neutralization, FC, ELISA, WB	SIM0006	BP0297
*InVivo*SIM™ anti-human VEGF (Bevacizumab Biosimilar)	VEGF neutralization, FC, ELISA, IP, WB	SIM0007	BP0297
*InVivo*SIM™ anti-human VEGFR-2 (Ramucirumab Biosimilar)	Functional assays, IHC, FC	SIM0012	BP0297

IF Immunofluorescence | **IHC-F** Immunohistochemistry (frozen) | **IHC-P** Immunohistochemistry (paraffin) | **WB** Western blot | **IP** Immunoprecipitation | **FC** Flow cytometry (requires flurochrome conjugation), Human (Hu), Mouse (Mo), Rat (Rt)

TIME WAITS FOR NO ONE

Enlist the experts at Bio X Cell for Antibody Production Services



At Bio X Cell, we know that growing hybridoma cells and purifying antibodies in large quantities with low endotoxin levels can be technically challenging and time-consuming. Bio X Cell's optimized fermentation process allows us to scale up antibody production from milligrams to grams much faster than traditional methods. Additionally, we offer customizable services including cell freezing and storage, mycoplasma testing, isotyping, murine pathogen screening, and more. We know that research moves at a rapid and precise pace, and we aim to partner with you to achieve your goals faster.

- 25 years of expertise
- Fast turnaround time
- Customizable services
- Ultra-high purity
- Low endotoxin levels
- MAP testing

To discuss your antibody production projects, please reach us at contractservices@bioxcell.com

Phase	Description	Included	Additional Fee
1. Pilot	Instructions for preparing and shipping cells.	✓	
	Assessment of cell line productivity: >30mg of antibody/Liter is required or Bio X Cell cannot proceed to scale up and a pilot fee will be charged ($800 Academic, $1,000 Commercial).	✓	
	Mycoplasma testing service.		✓
	Isotyping of cell culture supernatant.		✓
2. Fermentation	Cell culturing and monitoring 7 days/week.	✓	
	Freezing of five vials of cells.		✓
	Storage of cells at Bio X Cell for rapid resupply.		✓
	Expansion of cells using optimized fermentation process.	✓	
	Concentration of cell supernatant.	✓	
3. Purification	Purification of supernatant on Protein A or G.	✓	
	Buffer exchange to PBS that is preservative and stabilizer.	✓	
	Expansion of cells using optimized fermentation process.	✓	
	Sterile filtering of final product.	✓	
	Testing to confirm <2EU/mg endotoxin. <1EU/mg available for an extra charge.	✓	
4. Vialing and QC	Sterile vialing of finished product. Custom aliquoting available for an extra charge.	✓	
	Internal antibody quality assessment.	✓	
	Certificate of Analysis	✓	
	Murine pathogen screening service.		✓
5. Shipping	Shipping on cold packs in environmentally friendly packaging.		✓