



In Vivo Antibodies



Preclinical

FUNCTIONAL
GRADE

Functional mAbs | Blocking | Neutralization | Cell Depletion | Activation | Other Applications
Low Endotoxin \leq 1.0 EU/mg | \geq 95% Purity | No Preservatives, Stabilizers, Carrier Protein
Immuno-Oncology | Neuroscience | Immunology | Immune Checkpoint | Isotype Controls

LOW & ULTRA LOW ENDOTOXIN ANTIBODIES

| Specifications | <i>in vivo</i> mAbs Low Endotoxin | <i>in vivo</i> mAbs Ultra Low Endotoxin |
|--|---|---|
| Binding validation determined by WB, FC or ELISA | Yes | Yes |
| Endotoxin level determined by the LAL method | ≤ 1.0 EU/mg | ≤ 0.5 EU/mg |
| Antibody aggregation screening by analytical SEC | ≥ 95% monomer | ≥ 98% monomer |
| Purity by SDS PAGE | ≥ 95% | ≥ 98% |
| Formulation for <i>in vivo</i> use | No Preservatives No stabilizers No carrier protein Sterile PBS pH 7.2 - No K ⁺ or CA ²⁺ Concentration: > 5mg/mL | No Preservatives No stabilizers No carrier protein Sterile PBS pH 7.2 - No K ⁺ or CA ²⁺ Concentration: > 5mg/mL |
| Murine pathogen screening | Not applicable, see Ultra Low Endotoxin functional grade antibodies | Pathogen tested (IMPACT1) (see table) |
| Applications | <i>In vivo</i> functional studies and may be used for WB, FC, IF or IHC | |
| Product preparation | Functional grade preclinical antibodies are manufactured in an animal free facility using only <i>in vitro</i> protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates. | |
| Storage and handling | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 1 month, 2 to 8 °C under sterile conditions, as supplied. • 12 months, -70 °C under sterile conditions. | |

IDEXX IMPACT I (PCR-based) Mouse Pathogen Profile for Ultra Low Endotoxin *In vivo* Grade Antibodies

| | | |
|---|-------------------------------------|--|
| Mycoplasma sp. | Mouse adenovirus 1 (MAV1) | Lactate dehydrogenase-elevating virus (DLEV) |
| Mycoplasma pulmonis | Mouse adenovirus 2 (MAV2) | Mouse kidney parvovirus (MKPV) |
| Sendal virus | Murine norovirus (MNV) | Hantaan virus |
| Mouse hepatitis virus (MHV) | Reovirus (REO3) | Mouse cytomegalovirus (mCMV) |
| Pneumonnia virus of mice (PvM) | Mouse rotavirus (EDIM) | K virus |
| Minute virus of mice (MPV) | Ectromelia virus | Mouse thymic virus (MTV) |
| Mouse parovirus (MPV) | Polymavirus | <i>Corynebacterium bovis</i> |
| Theiler's murine encephalomyelitis (TMEV) | Lymphocytic choriomeningitis (LCMV) | <i>Corynebacterium sp.</i> |

EXTENSIVE QC & BIOANALYTICAL VALIDATION

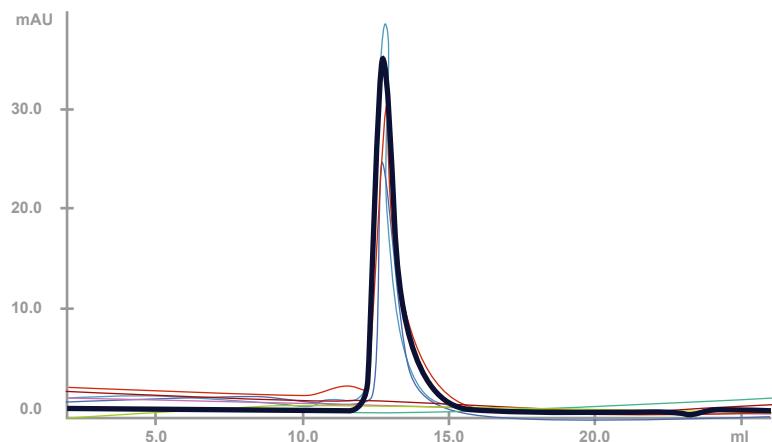
Antibodies and isotypes tested

Independent comparison of the in vivo efficacy and tolerability of clones of mAbs anti-PD-1 [RMP1-14 and 29F.1A12], anti-PD-L1 [10F.9G2], and anti-CTLA-4 [9H10] and isotype controls versus Vendor B using a CT26 syngeneic model (murine colorectal carcinoma derived from BALB/c mice). All antibodies had matching isotype controls, and phosphate-buffered saline (PBS) was used as a control.

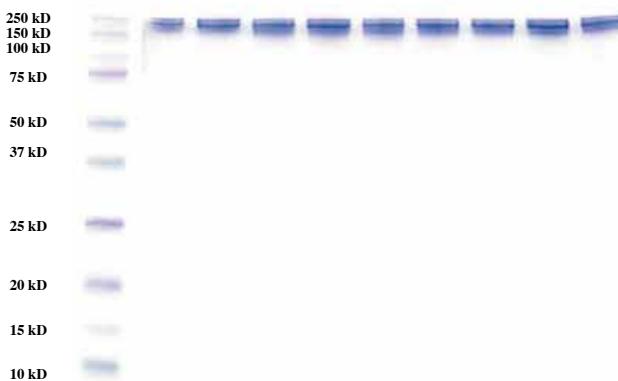
A: Endotoxin analysis

| Lot | EU/mg |
|----------|-------|
| 0321 205 | <0.24 |
| 0421 225 | <0.24 |
| 0421 255 | <0.24 |
| 0521 275 | <0.06 |
| 0122 245 | <0.24 |
| 0322 250 | <0.24 |
| 0422 285 | <0.12 |
| 0622 340 | <0.03 |

B: Chromatographic analysis



C: Non-reducing



D: Reducing



Figure 1. Quality control for different lots of PD-1 [RMP1-14] antibody. All the in vivo antibodies undergo extensive quality control ensuring extreme lot-to-lot reproducibility.

Endotoxin data for eight lots demonstrate that all lots were below the specification of ≤ 0.5 EU/mg as determined by the limulus amebocyte lysate (LAL) method (Fig. 1A).

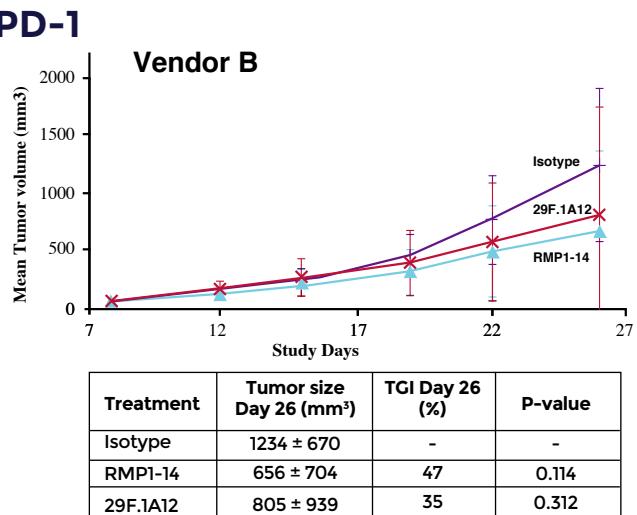
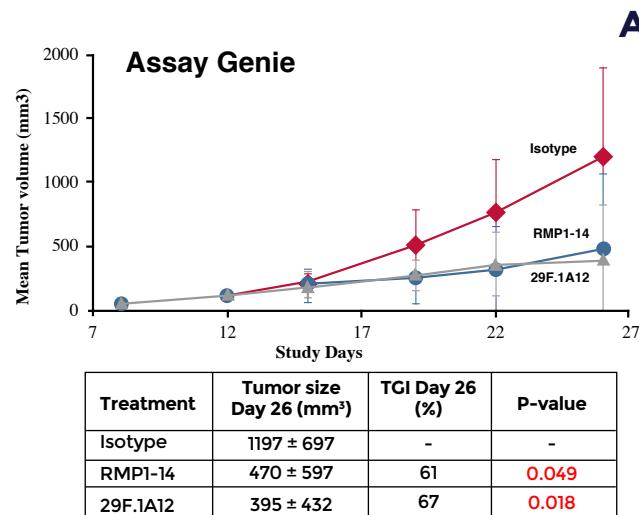
Analysis by size exclusion chromatography visualized by superimposing chromatograms for all nine lots, with overlapping retention times and minimal baseline noise (Fig. 1B).

All lots show high purity as shown by non-reducing and reducing SDS-PAGE (Fig. 1C and 1D).

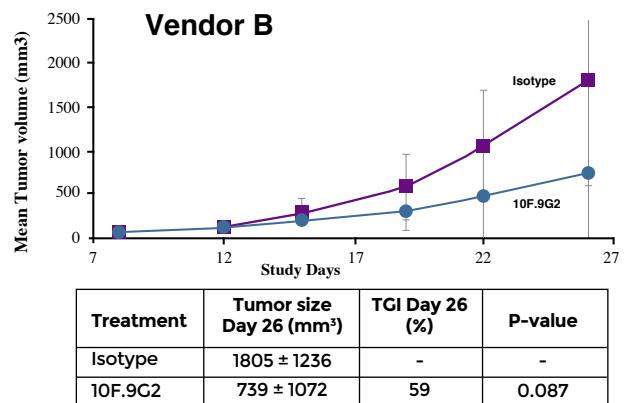
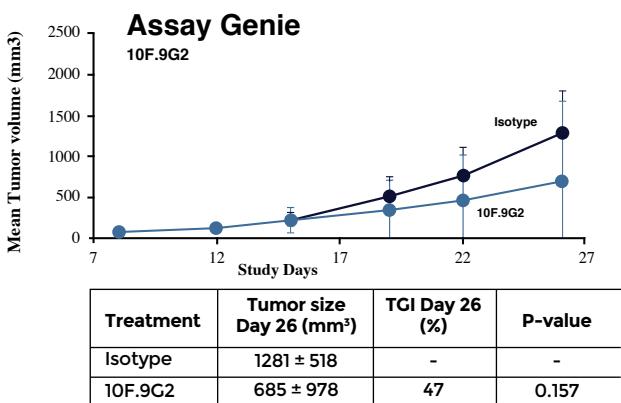
EFFICACY & TOLERABILITY BENCHMARKING

Antibodies and isotypes tested

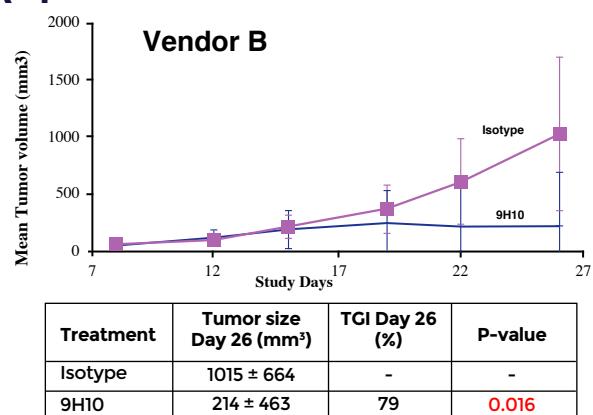
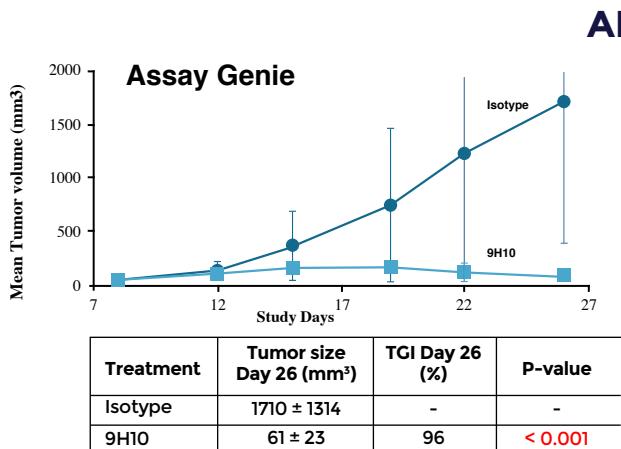
Independent comparison of the in vivo efficacy and tolerability of clones of mAbs anti-PD-1 [RMP1-14 and 29F.1A12], anti-PD-L1 [10F.9G2], and anti-CTLA-4 [9H10] and isotype controls versus Vendor B using a CT26 syngeneic model (murine colorectal carcinoma derived from BALB/c mice). All antibodies had matching isotype controls, and phosphate-buffered saline (PBS) was used as a control.



Anti-PD-1 antibody clones (RMP1-14 and 29F.1A12) were more efficacious than Vendor B (Figure 1).



Anti-PD-L1 10F.9G2 clones from both providers showed similar antitumor activity (tumor growth inhibition (TGI) of 47% and 59%, respectively). The efficacy of anti-PD-L1 10F.9G2 was in line with internally generated data. (Figure 2)



The Assay Genie anti-CTLA-4 clone 9H10 was significantly more efficacious than the same clones from the other vendor (Figure 3).

ANTI-MOUSE IN VIVO ANTIBODIES

| Immune Checkpoint & Cancer Biology | | | | Product Codes | |
|---|--------------|-----------|---|---------------|---------------------|
| In Vivo Antibodies Product Names | Reactivity | Clone | Applications | Low Endotoxin | Ultra Low Endotoxin |
| PD-1(CD279)(Clone RMPI-14) In Vivo mAb | Mouse | RMPI-14 | In vivo, B, FA, WB | IVMB0037 | IVMB0038 |
| PD-1(CD279)(Clone 29F.1A12) In Vivo mAb | Mouse | 29F.1A12 | In vivo, B, CODEX®, CyTOF®, FC, IHC FF, WB | IVMB0031 | IVMB0032 |
| PD-L1 (Clone 10F.9G2) In Vivo mAb | Mouse | 10F.9G2 | In vivo, B, CODEX®, FC, IHC FF, WB | IVMB0095 | IVMB0096 |
| PD-L2 (CD273) In Vivo mAb | Mouse/Human | 3.2.B8 | In vivo, B, FC, WB | IVMB0116 | IVMB0115 |
| PD-L2 (B7-DC) In Vivo mAb | Mouse | TY25 | In vivo, FC, IHC FF, IP, WB | IVMB0039 | |
| CTLA-4 (Clone 9D9) In Vivo mAb | Mouse | 9D9 | In vivo, FA, WB | IVMB0072 | IVMB0073 |
| CTLA-4 (Clone 9H10) In Vivo mAb | Mouse | 9H10 | In vivo, B, WB | IVMB0047 | IVMB0048 |
| CTLA-4 (CD152) In Vivo mAb | Mouse | UCT0-4F10 | In vivo, FA, FC, IP, WB | IVMB0049 | IVMB0050 |
| CD28 In Vivo mAb | Mouse | 37.5I | In vivo, B, Costim, CyTOF®, FC, IHC FF, IP, WB | IVMB0056 | IVMB0057 |
| 4-1BB In Vivo mAb | Mouse | 3H3 | In vivo, ELISA, FA, WB | IVMB0045 | IVMB0046 |
| CD120a(TNFR!) (Clone 55R-T70) In Vivo mAb | Mouse | 55R-170 | In vivo, B, IP, WB | IVMB0142 | IVMB0144 |
| CD120a(TNFR!) (Clone 55R-593) In Vivo mAb | Mouse | 55R-593 | In vivo, IP, WB | IVMB0143 | IVMB0145 |
| CD172a In Vivo mAb | Mouse | P84 | In vivo, B, CyTOF®, FC, IHC FF, IP | IVMB0029 | IVMB0030 |
| CD19 In Vivo mAb | Mouse | 1D3 | In vivo, B, CODEX®, Depletion, FC, IHC FF, IP, WB | IVMB0051 | IVMB0052 |
| CD209b In Vivo mAb | Mouse | 22D1 | In vivo, B, FC, IHC FF, WB | IVMB0053 | IVMB0054 |
| CD278 (ICOS) In Vivo mAb | Mouse | 7E.17G9 | In vivo, B, FA, WB | IVMB0082 | IVMB0083 |
| CD40 (Clone FGK45) In Vivo mAb | Mouse | FGK45 | In vivo, Act, FA, FC | IVMB0152 | IVMB0153 |
| CD70 (Clone TAN1-7) In Vivo mAb | Mouse | TAN1-7 | In vivo, B, ELISA, FA, FC, IF | IVMB0170 | |
| CD80 In Vivo mAb | Mouse | 16-10A1 | In vivo, B, CyTOF®, IP, WB | IVMB0066 | IVMB0067 |
| CD86 (B7-2) In Vivo mAb | Mouse | GL1 | In vivo, B, ELISA, WB | IVMB0156 | IVMB0157 |
| CLEC9A (CD370) In Vivo mAb | Mouse | 1F6 | In vivo, FC, IF, WB | IVMB0169 | |
| GM-CSF In Vivo mAb | Mouse | MPI-22E9 | In vivo, N, WB | IVMB0076 | IVMB0077 |
| IL-7Ra (CD127) In Vivo mAb | Mouse | A7R34 | In vivo, B, CyTOF®, FA, FC, IF Staining, IHC FF, IP, WB | IVMB0044 | |
| LAG-3 (CD223) In Vivo mAb | Mouse | C9B7W | In vivo, B, FA, IP, WB | IVMB0088 | |
| Ly-6G In Vivo mAb | Mouse | 1A8 | In vivo, CODEX®, CyTOF®, Depletion, FC, IHC FF, WB | IVMB0025 | IVMB0026 |
| Ly-6G/Ly-6C (Gr-1) In Vivo mAb | Mouse | RB6-8C5 | In vivo, CyTOF®, Depletion, IHC FF, IP, WB | IVMB0091 | IVMB0092 |
| TGF-β1, 2, 3 In Vivo mAb | Human, Mouse | 1D11.16.8 | In vivo, IHC, N, WB | IVMB0081 | |
| Tim-3 (CD366) In Vivo mAb | Mouse | RMT3-23 | In vivo, B, CODEX®, FC, IF Staining, IHC, IHC FF | IVMB0097 | |

| Adhesion & Migration | | | | Product Codes | |
|--|--------------|-----------|--|---------------|---------------------|
| In Vivo Antibodies Product Names | Reactivity | Clone | Applications | Low Endotoxin | Ultra Low Endotoxin |
| CD11a (Clone I21/7) In Vivo mAb | Mouse | I21/7 | In vivo, FA, FC | IVMB0139 | IVMB0140 |
| CD11c (Integrin alpha X) In Vivo mAb | Mouse | N418 | In vivo, B, CODEX®, CyTOF®, IHC FF, WB | IVMB0141 | |
| CD155 (PVR) In Vivo mAb | Mouse | 4.24.1 | In vivo, FC | IVMB0146 | IVMB0147 |
| CD44 (Clone IM7) In Vivo mAb | Mouse/Human | IM7 | In vivo, CODEX®, CyTOF®, ELISA Det, FC, ICC, IHC, IP, WB | IVMB0078 | IVMB0079 |
| CD54 (Clone YN1/1.7.4) In Vivo mAb | Mouse | YN1/1.7.4 | In vivo, CODEX®, CyTOF®, FA, FC, IHC FF, IP, WB | IVMB0062 | IVMB0063 |
| CDCP1 (CD318) In Vivo mAb | Human, Mouse | 9A2 | In vivo, FC | IVMB0138 | |
| ICAM-1(CD54) (Clone BE29G1) In Vivo mAb | Mouse | BE29G1 | In vivo, B, IP, WB | IVMB0168 | IVMB0167 |
| Integrin β7 In Vivo mAb | Human, Mouse | F1B504 | In vivo, B, CyTOF®, FC, IP | IVMB0087 | |
| ITGAM (CD11b) In Vivo mAb | Mouse | M1/70 | In vivo, CODEX®, CyTOF®, FA, FC, ICC, IHC FF | IVMB0042 | IVMB0043 |
| LFA-1α (CD11a) (Clone FD441.8) In Vivo mAb | Mouse | FD441.8 | In vivo, FA, FC, WB | IVMB0040 | IVMB0041 |
| LPAM-1 (Integrin α4β7) In Vivo mAb | Mouse | DATK32 | In vivo, B, FC, IHC FF, IP | IVMB0089 | IVMB0090 |
| L-Selectin (CD62L) In Vivo mAb | Mouse | MEL-14 | In vivo, B, CyTOF®, FA, FC, IHC FF, IP, WB | IVMB0064 | IVMB0065 |
| TGF-β1, 2, 3 In Vivo mAb | Human, Mouse | 1D11.16.8 | In vivo, IHC, N, WB | IVMB0081 | |

ANTI-MOUSE IN VIVO ANTIBODIES

| Immunology T Cell Depletion | | | | Product Codes | |
|---|-------------|----------|---|---------------|---------------------|
| In Vivo Antibodies Product Names | Reactivity | Clone | Applications | Low Endotoxin | Ultra Low Endotoxin |
| CD3ε (Clone 145-2C11) In Vivo mAb | Mouse | 145-2C11 | In vivo, Act, B, CODEX®, CyTOF®, Depletion, FA, FC, IF, IHC, WB | IVMB0058 | IVMB0059 |
| CD3ε (Clone 500A2) In Vivo mAb | Mouse | 500A2 | In vivo, B, FC, IHC FF | IVMB0150 | IVMB0151 |
| CD90 (Thy-1) (Clone T24/31) In Vivo mAb | Mouse | T24/31 | In vivo, Depletion, FA, FC, WB | IVMB0161 | IVMB0158 |
| CD90 (Thy-1) (Clone HK2.1) In Vivo mAb | Mouse | HK2.1 | In vivo, FA, WB | IVMB0160 | IVMB0159 |
| CD90.2 (Thy 1.2) In Vivo mAb | Mouse | 30-H12 | In vivo, CODEX®, Costim, CyTOF®, Depletion, FC, IHC FF, WB | IVMB0162 | IVMB0163 |
| TCR γ/δ In Vivo mAb | Mouse | UC7-13D5 | In vivo, Depletion, FC, IP | IVMB0035 | IVMB0036 |
| Immunology CD4+ T-cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| CD4 (Clone GK1.5) In Vivo mAb | Mouse | GK1.5 | In vivo, B, Costim, CyTOF®, Depletion, FA, FC, IHC, IP | IVMB0060 | IVMB0061 |
| Immunology B-cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| CD45R (B220)(Clone RA3-6B2) In Vivo mAb | Mouse/Human | RA3-6B2 | In vivo, Act, CODEX®, CyTOF®, Depletion, FA, FC, IHC FF, IP | IVMB0180 | IVMB0179 |
| CD19 In Vivo mAb | Mouse | 1D3 | In vivo, B, CODEX®, Depletion, FC, IHC FF, IP, WB | IVMB0051 | IVMB0052 |
| Immunology CD8+ T-cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| CD8a (Ly 2) In Vivo mAb | Mouse | 53-6.7 | In vivo, B, CODEX®, CyTOF®, Depletion, FC, IHC FF, IP, WB | IVMB0068 | IVMB0069 |
| CD8a (Ly 2.2) In Vivo mAb | Mouse | 2,43 | In vivo, Depletion, FA, FC, ICC, IF Staining, IHC FFPE, IP | IVMB0070 | IVMB0071 |
| CD8 (Clone YTS 169) In Vivo mAb | Mouse | YTS-169 | In vivo, Depletion, FC, IHC FF, WB | IVMB0154 | IVMB0155 |
| CD8b.2 In Vivo mAb | Mouse | 53-5.8 | In vivo, Depletion, FA, FC, ICC, WB | IVMB0093 | IVMB0094 |
| Immunology T-reg Cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| IL-2Ra (CD25) In Vivo mAb | Mouse | PC61 | In vivo, B, CODEX®, Depletion, FA, FC, IHC FF, IP, WB | IVMB0148 | IVMB0149 |
| Immunology γδ T cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| TCR Vγ2 In Vivo mAb | Mouse | UC3-10A6 | In vivo, Depletion, FC, IP | IVMB0074 | IVMB0075 |
| Immunology NK cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| NK1.1 In Vivo mAb | Mouse | PK136 | In vivo, B, CyTOF®, Depletion, FC, IP, WB | IVMB0100 | IVMB0101 |
| Immunology Innate lymphoid cell (ILC) Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| Ly-6G/Ly-6C (Gr-1) In Vivo mAb | Mouse | RB6-8C5 | In vivo, CyTOF®, Depletion, IHC FF, IP, WB | IVMB0091 | IVMB0092 |
| CSF-1R (CD115) In Vivo mAb | Mouse | AFS98 | In vivo, B, CyTOF®, Depletion, FA, FC | IVMB0001 | IVMB0002 |
| Immunology Macrophage Cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| CSF-1R (CD115) In Vivo mAb | Mouse | AFS98 | In vivo, B, CyTOF®, Depletion, FA, FC | IVMB0001 | IVMB0002 |
| CD209b In Vivo mAb | Mouse | 22D1 | In vivo, B, FC, IHC FF, WB | IVMB0053 | IVMB0054 |
| Immunology Neutrophil Cell Depletion | | | | Low Endotoxin | Ultra Low Endotoxin |
| Ly-6G In Vivo mAb | Mouse | 1A8 | In vivo, CODEX®, CyTOF®, Depletion, FC, IHC FF, WB | IVMB0025 | IVMB0026 |
| Ly-6G/Ly-6C (Gr-1) In Vivo mAb | Mouse | RB6-8C5 | In vivo, CyTOF®, Depletion, IHC FF, IP, WB | IVMB0091 | IVMB0092 |

MOUSE IN VIVO ANTIBODIES

| Immunology Cytokines, Chemokines & Receptors | | | | Product Codes | |
|---|------------|-------------------------|--|---------------|---------------------|
| In Vivo Antibodies Product Names | Reactivity | Clone | Applications | Low Endotoxin | Ultra Low Endotoxin |
| IL-1 α In Vivo mAb | Mouse | ALF-161 | In vivo, N, WB | IVMB0005 | |
| IL-1 β In Vivo mAb | Mouse | B122 | In vivo, IP, N, WB | IVMB0085 | |
| IL-1R (CD121a) In Vivo mAb | Mouse | JAMA-147 | In vivo, B, IP, WB | IVMB0006 | |
| IL-2 (Clone: JES6-1A12) In Vivo mAb | Mouse | JES6-1A12 | In vivo, IP, N, WB | IVMB0024 | |
| IL-4 (Clone 11B11) In Vivo mAb | Mouse | 11B11 | In vivo, CyTOF®, ELISA Cap, ELISPOT, FA, ICC, IHC, IP, N | IVMB0086 | |
| IL-6Ra (CD126) In Vivo mAb | Mouse | D7715A7 (15A7) | In vivo, FA, FC, N, WB | IVMB0181 | |
| IL-10 In Vivo mAb | Mouse | JESS-2A5 | In vivo, CyTOF®, N, WB | IVMB0084 | |
| IL-12 In Vivo mAb | Mouse | C17.8 | In vivo, ELISA, ICFC, IP, N, WB | IVMB0023 | |
| CD120b (TNFR2) In Vivo mAb | Mouse | TR75-54.7 | In vivo, B, ELISA Cap, FC, IP, WB | IVMB0098 | IVMB0099 |
| CSF-1R (CD115) In Vivo mAb | Mouse | AFS98 | In vivo, B, CyTOF®, Depletion, FA, FC | IVMB0001 | IVMB0002 |
| GM-CSF In Vivo mAb | Mouse | MP1-22E9 | In vivo, N, WB | IVMB0076 | IVMB0077 |
| RANKL (CD254) In Vivo mAb | Mouse | IK22/5 | In vivo, B, FC, IP, WB | IVMB0055 | |
| TNF α In Vivo mAb | Mouse | TN3-19.12 | In vivo, IP, N, WB | IVMB0007 | IVMB0008 |
| Immunology Interferons | | | | Low Endotoxin | Ultra Low Endotoxin |
| IFN α In Vivo mAb | Mouse | TIF-3C5 | In vivo, B, FA, N, WB | IVMB0173 | IVMB0174 |
| IFN β In Vivo mAb | Mouse | MIB-5E9.1 | In vivo, N, WB | IVMB0175 | |
| IFN β In Vivo mAb | Mouse | HDB-4A7 | In vivo, B, FA, N, WB | IVMB0171 | IVMB0172 |
| IFN γ (Clone H22) In Vivo mAb | Mouse | H22 | In vivo, ELISA, IF, IP, N, WB | IVMB0033 | IVMB0034 |
| IFN γ (Clone XMG1.2) In Vivo mAb | Mouse | XMG1.2 | In vivo, CyTOF®, ELISA Cap, ELISPOT, ICFC, IHC FF, N, WB | IVMB0022 | |
| IFNAR-1 In Vivo mAb | Mouse | MAR1-5A3 | In vivo, B, ELISA, FC, IP, WB | IVMB0202 | IVMB0004 |
| Immunology MHC & Other Antibodies | | | | Low Endotoxin | Ultra Low Endotoxin |
| H-2b In Vivo mAb | Mouse | B8-24-3 | In vivo, FA | IVMB0166 | |
| H-2Kd (MHC Class I) In Vivo mAb | Mouse | A4C8.1-Do9 | In vivo, FC, WB | IVMB0178 | |
| H-2Kb (MHC Class I, Clone Y-3) In Vivo mAb | Mouse | Y-3 | In vivo, FA, ICC, IP, WB | IVMB0009 | |
| CD32/CD16 In Vivo mAb | Mouse | 2.4G2 | In vivo, B, CODEX®, FA, FC, IHC FF, IP, WB | IVMB0027 | IVMB0010 |
| CD3 ϵ (Clone 500A2) In Vivo mAb | Mouse | 500A2 | In vivo, B, FC, IHC FF | IVMB0150 | IVMB0028 |
| Dendritic Cells In Vivo mAb | Mouse | 33D1 | In vivo, WB | IVMB0164 | IVMB0151 |
| Ly-6C (Clone 7B10) In Vivo mAb | Mouse | 7B10 | In vivo, WB | IVMB0176 | IVMB0165 |
| Ly-6C (Clone HK1.4) In Vivo mAb | Mouse | HK1.4 | In vivo, CODEX®, CyTOF®, IHC FF, IP, WB | IVMB0177 | IVMB0177 |
| Isotype Controls | | | | Product Codes | |
| In Vivo Antibodies Product Names | Clone | Applications | | Low Endotoxin | Ultra Low Endotoxin |
| Armenian Hamster IgG Isotype Control In Vivo mAb | PIP | In vivo Isotype control | | IVMB0182 | IVMB0183 |
| Mouse IgG1 Isotype Control (Clone HKSP) In Vivo mAb | HKSP | In vivo Isotype control | | IVMB0184 | IVMB0187 |
| Mouse IgG1 Isotype Control (Clone HKSP84) In Vivo mAb | HKSP84 | In vivo Isotype control | | IVMB0185 | IVMB0186 |
| Mouse IgG2a Isotype Control In Vivo mAb | C1.18.4 | In vivo Isotype control | | IVMB0188 | IVMB0189 |
| Mouse IgG2b Isotype Control In Vivo mAb | MPC-11 | In vivo Isotype control | | IVMB0190 | IVMB0191 |
| Mouse IgG3 Isotype Control In Vivo mAb | MG3-35 | In vivo Isotype control | | IVMB0192 | IVMB0193 |
| Mouse IgM Isotype Control In Vivo mAb | | In vivo Isotype control | | IVMB0194 | IVMB0195 |
| Rat IgG1 Isotype Control In Vivo mAb | GL113 | In vivo Isotype control | | IVMB0196 | IVMB0197 |
| Rat IgG2a Isotype Control In Vivo mAb | '1-1 | In vivo Isotype control | | IVMB0199 | IVMB0198 |
| Rat IgG2b Isotype Control In Vivo mAb | '1-2 | In vivo Isotype control | | IVMB0200 | IVMB0201 |

ANTI-HUMAN & OTHER SPECIES IN VIVO ANTIBODIES

| Immunology Human, NHP & Other Species | | | | Product Codes | |
|--|-------------------------------|-----------|---|---------------|---------------------|
| In Vivo Antibodies Product Names | Reactivity | Clone | Applications | Low Endotoxin | Ultra Low Endotoxin |
| Alpha Defensin-5 (HD5) In Vivo mAb | Human | 8C8 | In vivo, Dot, ELISA, IHC FFPE, WB | IVMB0102 | |
| CD11a In Vivo mAb | Human | 38 | In vivo, Costim, FC, WB | IVMB0105 | IVMB0106 |
| CD11b In Vivo mAb | Human | ICRF44 | In vivo, CODEX®, FC, IF Staining, IHC FF | IVMB0107 | IVMB0108 |
| CD11c In Vivo mAb | Human | 3,9 | In vivo, B, CyTOF®, FA, FC, WB, IHC FF | IVMB0109 | IVMB0110 |
| CD14 In Vivo mAb | Human | UCHM-1 | In vivo, FC, WB | IVMB0111 | |
| CD16 (Clone 3G8) In Vivo mAb | NHP, Human | 3G8 | In vivo, B, CyTOF®, FC, IHC FF, IP | IVMB0112 | IVMB0113 |
| CD2 In Vivo mAb | Human | G11 | In vivo, Costim, FC, IHC, WB | IVMB0114 | |
| CD20 In Vivo mAb | Human | 2H7 | In vivo, CyTOF®, FC, WB | IVMB0018 | IVMB0019 |
| CD25 (IL-2R α) In Vivo mAb | Human | 7G7B6 | In vivo, ELISA, FC, IF Staining, IP, WB | IVMB0011 | |
| CD3 (Clone UCHT-1) In Vivo mAb | Human | UCHT-1 | In vivo, Act, CODEX®, CyTOF®, FC, IF, IHC FF, IP, WB | IVMB0117 | IVMB0118 |
| CD38 (Clone OKT10) In Vivo mAb | NHP, Human | OKT10 | In vivo, FC | IVMB0119 | IVMB0120 |
| CD4 (Clone OKT-4) In Vivo mAb | Human | OKT-4 | In vivo, CODEX®, ELISA, FC, ICC, IF, IHC, IP, N, WB | IVMB0012 | |
| CD40 (Clone G28.5) In Vivo mAb | Human | G28.5 | In vivo, FA, FC | IVMB0013 | |
| CD44 (Clone IM7) In Vivo mAb | H, M, NHP, Bovine, Horse, Pig | IM7 | In vivo, CODEX®, CyTOF®, ELISA Det, FC, ICC, IHC, IHC, IP, WB | IVMB0078 | IVMB0079 |
| CD45R (B220) (Clone RA3-6B2) In Vivo mAb | Mouse/Human | RA3-6B2 | In vivo, Act, CODEX®, CyTOF®, Depletion, FA, FC, IHC FF, IP | IVMB0180 | IVMB0179 |
| CD62L In Vivo mAb | Human | DREG56 | In vivo, B, CODEX®, FC, IF, IHC FF, WB | IVMB0121 | IVMB0122 |
| CD7 In Vivo mAb | Human | T3-3A1 | In vivo, FC, IF Staining | IVMB0123 | |
| CD71 In Vivo mAb | Human | T56/14 | In vivo, FC, WB | IVMB0016 | IVMB0017 |
| CD8 In Vivo mAb | Human | UCHT-4 | In vivo, FA, FC, WB | IVMB0124 | IVMB0125 |
| CDCP1 (CD318) In Vivo mAb | Human | GIR-208 | In vivo, FA, FC | IVMB0103 | IVMB0104 |
| CDCP1 (CD318) In Vivo mAb | Human/Mouse | 9A2 | In vivo, FC | IVMB0138 | |
| EGFR In Vivo mAb | Human | EGFR.1 | In vivo, IHC, WB | IVMB0126 | IVMB0127 |
| Fibulin-4 In Vivo mAb | Human | 5G11 | In vivo, IF Microscopy, IF Staining, IHC FFPE, WB | IVMB0128 | |
| Hepsin (Clone 3H10.1) In Vivo mAb | Human | 3H10.1 | In vivo, ELISA, FC | IVMB0129 | |
| HLA A2,B7 (MHC Class I) In Vivo mAb | Human | BB7.6 | In vivo, FC | IVMB0130 | |
| HLA-A, B, C (MHC Class I) In Vivo mAb | NHP, Feline, Bovine, Human | W6/32 | In vivo, B, CODEX®, FC, IHC FF, IP, WB | IVMB0014 | IVMB0015 |
| HLA-DP (MHC Class II) Monomorphic mAb | Human | B7/21 | In vivo, FC, ICC | IVMB0131 | |
| HLA-DQ (MHC Class II) In Vivo mAb | Human | 1a3 | In vivo, ELISA, FC, IP, WB | IVMB0132 | IVMB0133 |
| HLA-DR (MHC Class II) In Vivo mAb | NHP, Canine, Human | L243 | In vivo, B, CODEX®, CyTOF®, Depletion, FC, IHC FF, IP, WB | IVMB0020 | IVMB0021 |
| ICAM-1 In Vivo mAb | Human | 15,2 | In vivo, FC, IHC FFPE, IP, WB | IVMB0134 | IVMB0135 |
| IL-4 In Vivo mAb | Human | MP4-25D2 | In vivo, CyTOF®, IHC, N, WB | IVMB0003 | |
| Integrin β 7 In Vivo mAb | Human/Mouse | F1B504 | In vivo, B, CyTOF®, FC, IP | IVMB0087 | |
| PD-L2 (CD273) In Vivo mAb | Mouse/Human | 3.2.B8 | In vivo, B, FC, WB | IVMB0116 | IVMB0115 |
| TCR Va24-J α 18 (iNKT cell) In Vivo mAb | Human | 6B11 | In vivo, CyTOF®, FC | IVMB0136 | IVMB0137 |
| TGF- β In Vivo mAb | H, M, R, Bovine, Hamster | 1D11.16.8 | In vivo, IHC, N, WB | IVMB0080 | |
| TGF- β 1, 2, 3 In Vivo mAb | Human, Mouse | 1D11.16.8 | In vivo, IHC, N, WB | IVMB0081 | |

Table Key | B = Blocking | N = Neutralizing | Costim = Costimulation | FC = Flow Cytometry | WB = Western Blotting | ICC = ImmunoCytoChemistry | IHC = In Situ Hybridization | IP = ImmunoPrecipitation | IF = ImmunoFluorescence