

**BIOMARKERS**
**RAT**

<b>ANTIBODIES</b>	<b>MATRIX</b>
Anti-KLH IgG/IgM (immunotox)	Serum
Total IgG, IgM	Serum
<b>Complement</b>	
C-Reactive Protein (CRP)	Serum, Plasma
<b>Cytokines</b>	
CXCL2 (CINC-3 / MIP-2)	Serum, BALF
Interleukin 1 alpha (IL-1 $\alpha$ )	BALF
Interleukin 6 (IL-6)	Serum, BALF
Transforming growth factor beta 1 (TGF- $\beta$ 1)	Lung extract
Tumor Necrosis Factor (TNF)	Serum
<b>Damage markers</b>	
Alpha-2-Macroglobulin (A2M)	Serum
Beta 2 Microglobulin (B2M)	Serum, Urine
Cardiac Troponin I (cTnI)	Serum
Clusterin	Serum, Urine
Cystatin C	Serum, Urine
Kidney injury marker 1 (KIM-1)	Serum, Urine
N-Acetyl- $\beta$ -(D)-Glucosaminidase (NAG)	Serum, Urine
Neutrophil gelatinase-associated lipocalin (NGAL)	Serum, Urine
Retinol Binding Protein (RBP)	Serum, Urine
<b>Hormones</b>	
Corticosterone	Serum
C-peptide	Serum
Growth hormone (GH)	Serum
Insulin	Serum
Insulin-like growth factor 1 (IGF-1)	Serum
Intact Parathyroid hormone (iPTH)	Serum, Plasma
Oxytocin	Serum
Prolactin	Serum
Thyroid-stimulating hormone (TSH)	Serum
Thyroxine (T4)	Serum
Triiodothyronine (T3)	Serum

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<b>Other biomarkers</b>	
Albumin	Serum, BALF, Urine
C-terminal telopeptides of Type I collagen (CTX)	Serum
Osteocalcin	Serum
<b>Functional assays</b>	
NK cell assay	Spleen
<b>Phenotypes</b>	
Absolute lymphocyte counts (T/B/NK panels)	Whole blood
Various surface and intracellular markers to combine:	
- Surface	
CD3, CD4, CD8, CD11c, CD14, CD16, CD19, CD20, CD25, CD43, CD44, CD45, CD45RA, CD115, CD138, CD159a, CD197, HLA-DR, TCR $\gamma\delta$ , MHCII	Whole blood, Splenocytes, Lymph nodes
- Intracellular	
FoxP3, IL-4, IL-6, IL10, IFN- $\gamma$ , Ki67, TGF- $\beta$ , TNF	Whole blood, Splenocytes, Lymph nodes
- Other : Viability, Apoptosis	Various cells