



Ethos Biosciences was founded in 2018 with acquisition of the Exocell® diagnostics arm of Glycadia, Inc. Ethos continues the design, development and manufacture of diagnostic test kits and reagents for nephrology research, with an emphasis on metabolic disorders.

The Astral Diagnostics and American Bionostica businesses and brands joined Ethos Biosciences in 2021, bringing additional decades of experience in specialty biologic dyes/stains and lateral flow test development.

### **Astral Diagnostics**

Astral Diagnostics has been a manufacturer of high-quality stains and reagents for laboratory, veterinary and clinical research and diagnostics for more than 20 years.

### American Bionostica

For more than two decades, American Bionostica has manufactured lateral flow tests and assays for OEM clients in food safety, environmental, veterinary medical, biodefense and clinical sectors.

### Exocell

For more than 35 years, Exocell has been a manufacturer of high-quality, easy-to-use diagnostic test kits and reagents for nephrology research.







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## **ELISAs**

Ethos Biosciences' Nephrology and Oxidative Stress ELISAs measure proteins and biomarkers that are of significance for kidney disease and other metabolic disorders. They are suitable for use with a range of sample types, including urine, plasma, serum and cell culture supernatants. Kits feature a 96-well plate format, intended for up to 40 unique samples per plate (in addition to duplicates and controls).

The Creatinine Companion (Cat. 1012) is commonly used in conjunction with albumin ELISAs for additional intra- and inter-assay standardization.

### **Nephrology**

Many conditions affect kidney function, including primary kidney disease, systemic metabolic conditions and lifestyle factors. Several biomarkers are useful for identifying and monitoring renal dysfunction and related conditions.

#### **ALBUMIN**

Kidneys affected by disease leak small to moderate amounts of protein into urine, a condition called microalbuminuria. Measuring urine albumin levels provides insight into the severity of kidney dysfunction.

#### **CREATININE**

Levels of creatinine, a protein normally present in urine, provide robust normalization to account for variations in urine concentration due to hydration status and time of day. Many measurements of urine analytes are presented as a ratio to creatinine.

### NGAL

Neutrophil gelatinase-associated lipocalin (NGAL) is released from neutrophils and kidney tubular cells during inflammation and under stress.

#### CYSTATIN (

Cystatin C is a small protein that is produced by cells and filtered by the glomerulus. It is reabsorbed by tubular epithelial cells and catabolized, so it does not return to the bloodstream; making it an excellent marker for GFR.

#### **NEPHRIN**

Required for normal kidney development, nephrin expression is downregulated in glomerular diseases such as diabetic nephropathy, though urinary nephrin levels are increased. Measurement of nephrin in urine is a marker of podocyte dysfunction that may reflect the integrity of the kidney's filtration barrier.

### **ELISA Kits: Nephrology Assays**

CAT#	ASSAY	TARGET / SPECIES	ASSAY PRINCIPLE	SPECIMEN	ASSAY RANGE	# PLATES
1004	Albuwell Hu	Albumin [Human]	direct competitive	urine [Hu]	0.156 - 10µg/ml	2 x 96-well plates
1011	Albuwell M	Albumin [Mouse]	direct competitive	urine [Mouse]	0.156 - 10µg/ml	2 x 96-well plates
NR002	Nephrat II	Albumin [Rat]	diect competitive	urine [Rat]	2.0 - 100µg/ml	2 x 96-well plates
1012	Creatinine Companion	Creatinine [Human, Mouse, Rat]	Jaffe reaction	urine [all species]	10 - 100µg/ml	2 x 96well plates
1035	Human Nephrin	Nephrin [Human]	indirect competitive	urine [Hu]	0.031-2.0µg/ml	1 x 96 well plate
1036	Rat Nephrin	Nephrin [Rat]	indirect competitive	urine [Rat]	0.156-10µg/ml	1 x 96 well plate
1037	Mouse Nephrin	Nephrin [Mouse]	indirect competitive	urine [Mouse]	0.031 - 2.0μg/ml	1 x 96 well plate
1041	Cystatin C, Human	Cystatin C [Human]	direct competitive	urine, serum, saliva, cell culture supernatant	7.8 - 500ng/ml	1 x 96 well plate
1042	Cystatin C, Rat	Cystatin C [Rat]	direct competitive	urine, serum, saliva, cell culture supernatant	7.8 - 500ng / ml	1 x 96 well plate
1043	Cystatin C, Mouse	Cystatin C [Mouse]	direct competitive	urine, serum, saliva, cell culture supernatant	7.8 - 500ng/ml	1 x 96 well plate
1038	Human NGAL	NGAL [Human]	direct Ab sandwich	urine, serum, cell culture [Human]	0.2-12.5 ng/ml	1 x 96 well plate
1039	Rat NGAL	NGAL [Rat]	direct Ab sandwich	urine, serum, cell culture [Rat]	0.4 - 25 ng/ml	1 x 96 well plate
1040	Mouse NGAL	NGAL [Mouse]	indirect competitive	urine, serum, cell culture [Mouse]	3.12 - 200 ng/ml	1 x 96 well plate

### **Oxidative Stress**

Oxidative stress occurs when a cell is unable to eliminate the damaging reactive oxygen species that arise as a normal consequence of mitochondrial function. It plays a key role in the pathogenesis of chronic conditions such as diabetes, cancer and cardiovascular and neurodegenerative diseases. Organs with high mitochondrial activity such as the kidneys are particularly vulnerable to this metabolic imbalance

### DNTB (ELLMAN'S) THIOL OXIDATIVE STRESS ASSAY

DTNB (5-5'-dithiobis [2-nitrobenzoic acid]) reacts with the disulfide bond in a sample to produce 2-nitro-5-thiobenzoic acid. Under conditions of oxidative stress, free thiols decrease and disulfides increase. Determination of the free thiol concentration in biological samples reflects the ability to detoxify lipid (and other) peroxides.

### TBARS MALONDIALDEHYDE OXIDATIVE STRESS ASSAY

Lipid peroxidation may impact biological membranes by altering structure, permeability and function, and is implicated in a number of disease states. Metabolic breakdown of the altered lipids results in the formation of "secondary messengers" including malondialdehyde (MDA), 4-hydroxynonenal and others. Measurement of MDA allows an assessment of oxidative stress.

The TBARS Malondialdehyde Oxidative Stress Assay relies upon the reaction of thiobarbituric acid and MDA under acidic conditions to form a colored (and fluorescent) adduct. Our kit is designed to allow ready assessment of TBARS MDA equivalents in biological samples using fluorometric or spectrophotometric methods.

### **ELISA Kits: Oxidative Stress Assays**

CAT#	ASSAY	TARGET / SPECIES	ASSAY PRINCIPLE	SPECIMEN	ASSAY RANGE	# PLATES
1021	DTNB-Thiols	Sulfhydryl groups [all species]	Chemical reaction; absorbance	serum, urine [all species]	15.6 - 1000 µmol	1 x 96 well plate
1020	Malondialdehyde / Universal TBARS	TBA-reactive substances in biologic samples [all species]	Chemical reaction, absorbance or fluorescence	universal	0 - 30 nmole fluor; 0 - 300 nmole spectrophotometry	1 x 96 well plate

### **Diluents & Buffers**

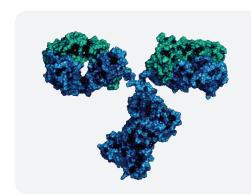
Our prepared diluents and wash buffers offer convenience for ELISA workflows. We offer both EIA (ELISA immunoassay) and NHE-BSA (NaCL-HEPES-RSA) versions

### **Diluents & Buffers**

CAT#	PRODUCT	DESCRIPTION	UNIT SIZE(S)
2001	EIA Diluent	ELISA Immunoassay Diluent	100mL, 1L
1Z0216	NHE-BSA Diluent	NaCl-HEPES-EDTA-BSA Diluent	100mL, 1L
1003	EIA Wash Buffer, 10X Concentrate	ELISA Immunoassay Wash Buffer, Concentrate	1L

# **Antibodies**

Ethos Biosciences' portfolio includes antibodies supporting investigations into renal dysfunction and related metabolic disorders. Antibody targets include albumin, glycated albumin and glycated hemoglobin A1c.

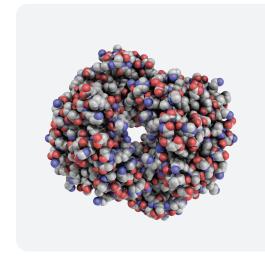


Antibodies							
CAT#	ANTIBODY	TYPE	PURIFICATION METHOD	AMOUNT / FORM	IMMUNOGEN	HOST Species	TARGET SPECIES
A717	Mouse Anti-Human Glycated Albumin	monoclonal [A717], IgG1	purified from ascites (protein A column)	0.1mg in 0.1 ml PBS, sterile-filtered preservative-free	native human glycated albumin from purified human plasma albumin	mouse	human
E85A	Mouse Anti-Human Glycated Hemoglobin A1c	monoclonal [E85A]	affinity purified from ascites (protein A column)	0.1mg in 0.1ml PBS, sterile-filtered, preservative-free	glycated hemoglobin	mouse	human
cAlbAb	Chicken Anti-Mouse Albumin, affinity purified	polyclonal, IgY	affinity purified (mouse albumin column)	0.1mg in PBS pH 7.2 + NaN3, sterile-filtered	mouse albumin	chicken	mouse
rAlbAb-AP	Rabbit Anti-Mouse Albumin, affinity purified	polyclonal, IgG	affinity purified (mouse albumin column)	0.1mg in PBS pH 7.2 + NaN3, sterile-filtered	mouse albumin	rabbit	mouse
rAlbAb-FP	Rabbit Anti-Mouse Albumin, fractionation purified	polyclonal, IgG	fractionation purified	0.1mg in PBS pH 7.2 + NaN3, sterile-filtered	mouse albumin	rabbit	mouse

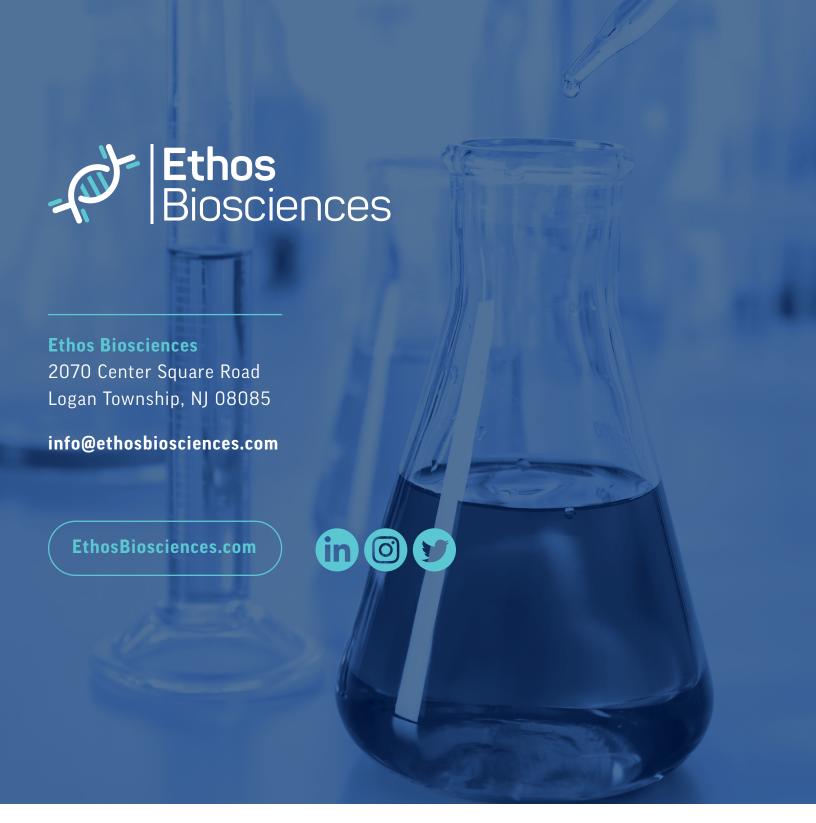
# **Hemoglobin Products**

Our hemoglobin products serve as biologic quality controls for analyzer and assay development and laboratory-based QC controls (e.g. linearity controls). They have additionally been utilized as immunogens for antibody development.

Hemoglobin Products					
CAT#	PRODUCT	Amount			
HbA0	Human Hemoglobin AO (HbAO)	5.0 mg			
HbA2	Human Hemoglobin A1a, A1b mixture	1.0 mg			
HbA1	Human Hemoglobin A1c	1.0 mg			
gly HbAO	Glycated Human Hemoglobin A0 (HbA0)	1.0 mg			
de HbAO	Deglycated Human Hemoglobin A0 (HbA0)	5.0 mg			



Hemoglobin Assay							
CAT#	ASSAY	TARGET / SPECIES	ASSAY PRINCIPLE	SPECIMEN	ASSAY RANGE	# PLATES	
1044	Drabkin's Microplate Hemoglobin Assay	Hemoglobin [all species]	Chemical reaction, absorbance	Blood samples, column fractions, etc.	0.5 mg/ml - 20 mg/ml	1 x 96-well plate	



### **INTERNATIONAL SALES & DISTRIBUTION**

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The Ott Scientific family of companies strives to develop innovative chemistries, products and services that support advancements across scientific disciplines. Together, we are dedicated to delivering the highly specialized products and services that support scientific discovery and innovations in diagnostics, medical device, specialty chemicals and technology.

We are proud to serve customers across the globe who are working to advance what's possible.







