

SGS LIFE SCIENCE SERVICES BIOMARKERS LIST

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View the complete list of Bioanalytical Methods online:

WWW.SGS.COM/BA-METHODS

The logo for SGS, consisting of the letters 'SGS' in a bold, sans-serif font. The letters are dark grey or black. A thin vertical line is positioned to the right of the 'S', and a thin horizontal line is positioned below the 'S', forming a partial frame around the logo.

INTRODUCTION

Although the majority of the methods listed here are SGS property, some of them were implemented for a particular sponsor to whom the methods belong, or need to be revalidated to be in accordance with current regulations. These methods are not immediately available for use but have been included in this document as an indication of our large bioanalytical experience. The assays can be validated upon request.

Note: newly validated assays are highlighted.

MATRIX

Species used is human unless otherwise specified.

LLOQ

The LLOQ is the lowest figure in the calibration range. For certain immunoassays, this value may correspond to the limit of detection, as stated by the kit manufacturer.

BIOMARKERS

The following tables contains selected Biomarkers, grouped by possible therapeutic area.

BONE DISEASE

COMPOUND	TECHNIQUE	MATRIX	LLOQ
CALCITONIN	RIA	SERUM	2 pg/mL
COLLAGEN I (CTX)	EIA	SERUM	492 pmol/l
COLLAGEN I TELOPEPTIDE (ICTP)	RIA	SERUM	1 ng/mL
ICTP	RIA	SERUM	1 ng/mL
OSTEOCALCIN	EIA	SERUM	4.7 ng/ml
PINP	RIA	SERUM	5 pg/mL
SALMON CALCITONIN	RIA	SERUM	5pg/mL

CARDIOVASCULAR

COMPOUND	TECHNIQUE	MATRIX	LLOQ
ALDOSTERONE	RIA	PLASMA	25 pg/mL
ANGIOTENSIN CONVERTING ENZYME (ACE)	RIA	SERUM	0-80 units
ANGIOTENSIN I (ARP)	RIA	PLASMA	0.3 ng/ml
ANGIOTENSIN II	EIA	PLASMA	1 pg/ml
ANTIDIURETIC HORMONE (ADH)	RIA	PLASMA	0.125 pg/tube
ANTIDIURETIC HORMONE (ADH)	RIA	URINE	0.125 pg/tube
ATRIAL NATRIURETIC PEPTIDE (ANP)	RIA	PLASMA	3 pg/tube
ATRIAL NATRIURETIC PEPTIDE (ANP)	RIA	URINE	15 pg/ml
BIG ENDOTHELIN-1	ELISA	PLASMA	1.56 pg/mL
CYCLIC ADENOSINE MONOPHOSPHATE	RIA	PLASMA	0.05 ng/mL
CYCLIC ADENOSINE MONOPHOSPHATE	RIA	URINE	0.25 pmol/ml
CYCLIC GUANOSINE MONPHOSPHATE (cGMP)	RIA	PLASMA	0-1 nmol/l
CYCLIC GUANOSINE MONPHOSPHATE (cGMP)	RIA	URINE	0.5 nmol/l
ENDOTHELIN-1	EIA	PLASMA (rat)	0.8 pg/mL
ENDOTHELIN-1	RIA	PLASMA	0.63 pg/tube
ENDOTHELIN-1	RIA	URINE	0.63 pg/tube
OXYTOCIN	ELISA	PLASMA	1.5 pg/mL
RENIN	RIA	PLASMA, SERUM	5 pg/ml
RENIN (PLASMA ACTIVITY)	RIA	PLASMA	Variable range
sICAM-1	EIA	PLASMA	1.86 pg/ml
sICAM-1	EIA	PLASMA	1.86 pg/mL
sVCAM-1	EIA	PLASMA	4.57 pg/mL
sVCAM-1	EIA	PLASMA	4.57 pg/mL
VASOACTIVE INTESTINAL PEPTIDE (VIP)	ELISA	PLASMA	35 pg/mL
VASOPRESSIN	SEE ADH		
VEGF-A	EIA	Serum	15.6 pg/mL

CNS

COMPOUND	TECHNIQUE	MATRIX	LLOQ
ADRENOCORTICOTROPIC HORMONE (ACTH)	RIA	PLASMA	16.8 pg/ml
5-HYDROXY INDOLE ACETIC ACID (5-HIAA)	HPLC/EC	PLASMA	0.5 ng/ml
DHPG / NORADRENALINE	HPLC/EC	PLASMA	50 pg/mL
DIHYDROXYPHENYL ACETIC ACID (DOPAC)	HPLC/EC	PLASMA	0.2 ng/ml

BIOMARKERS

CNS (CONT.)

COMPOUND	TECHNIQUE	MATRIX	LLOQ
DIHYDROXYPHENYL GLYCOL (DHPG, or	HPLC/EC	PLASMA	100 pg/ml
HOMOVANILLIC ACID (HVA)	HPLC/EC	PLASMA	0.5 ng/ml
NEUROPEPTIDE γ	RIA	PLASMA	3 pmol/mL
NEUROPTIDE Y	RIA	PLASMA	3 pmol/mL
NORADRENALINE	SEE ADRENALINE		
NOREPINEPHRINE	SEE ADRENALINE		
OXYTOCIN	ELISA	PLASMA	1.5 pg/mL
PROLACTIN	RIA	PLASMA	65 μ iu/ml
SOMASTATIN	ELISA	PLASMA	6 pg/mL

DIABETES

COMPOUND	TECHNIQUE	MATRIX	LLOQ
GLUCAGON	RIA	PLASMA	13 pg/ml
INSULIN	RIA	PLASMA	1 μ iu/ml
INSULIN LIKE GROWTH FACTOR (IGF-1)	RIA	PLASMA	2 ng/mL
INSULIN LIKE GROWTH FACTOR BINDING PROTEIN-3 (IGFBP-3)	RIA	PLASMA	50 ng/mL
PEPTIDE-c	RIA	PLASMA	0.15 ng/ml

GI DISEASE

COMPOUND	TECHNIQUE	MATRIX	LLOQ
GASTRIN	RIA	PLASMA	190 μ u/ml
MOTILIN	RIA	PLASMA	31.2 pmol/l
NOMATOSTATIN	EIA	PLASMA (rat)	15 pg/mL
PANCREATIC POLYPEPTIDE	RIA	PLASMA	Variable range
PINP	RIA	SERUM	5 pg/mL
SEROTONIN	EIA	PLASMA (rat)	50 pg/mL
SOMATOSTATIN	RIA	PLASMA	6 pg/mL

HEMATOLOGY

COMPOUND	TECHNIQUE	MATRIX	LLOQ
GM-CSF	EIA	PLASMA	7.8 pg/mL

INFLAMMATION

COMPOUND	TECHNIQUE	MATRIX	LLOQ
cGMP	EIA	PLASMA	0.08 pmol/mL
CORTISOL	RIA	PLASMA	7.25 ng/ml
CORTISOL	RIA	URINE	7 nmol/l
CORTISOL	LC/MS/MS	PLASMA	10 ng/ml
CORTISOL / 6 β - HYDROXYCORTISOL	LC/MS/MS	URINE (specific vs. 6 α -	1 // 2 ng/ml
CORTISOL + II-DEOXYCORTISOL	LC/MS/MS	PLASMA	5 // 1 ng/mL
CTACK	EIA	SERUM	15.6 pg/mL
IFN- α	EIA	SERUM	12.5 pg/mL

BIOMARKERS

INFLAMMATION (CONT.)

COMPOUND	TECHNIQUE	MATRIX	LLOQ
IL-10	EIA	PLASMA	7.8 pg/mL
IL-1b	EIA	PLASMA	3.9 pg/mL
IL-1 α	EIA	CULTUREMEDIUM	3.9 pg/mL
IL-1 β	EIA	PLASMA	3.9 pg/mL
IL-6	EIA	PLASMA	3.1 pg/mL
IL-8	EIA	PLASMA	30 pg/mL
LTB4	EIA	PLASMA	3.9 pg/mL
LTE4	EIA	URINE	7.8 pg/mL
PGE2	EIA	PLASMA	7.8 pg/mL
TARC	EIA	SERUM	31,3 pg/mL
THROMBOXANE TXB2	EIA	SERUM	2 ng/mL
TIMP-1	EIA	PLASMA	1.56 ng/mL
TNF-alpha	EIA	PLASMA	15.6 pg/mL
TNF- α	EIA	PLASMA	15.6 pg/mL
TxB2	EIA	SERUM	7.8 pg/mL

MEN'S HEALTH

COMPOUND	TECHNIQUE	MATRIX	LLOQ
CORTISOL	RIA	SERUM	10 ng/mL
CORTISOL	RIA	URINE	10 ng/mL
ESTRADIOL	RIA	SERUM	2 pg/mL
ESTRADIOL	RIA	SERUM	15 pg/mL
IgG DIPHTERIA	EIA	SERUM	0.01 IU/mL
OH-CORTISOL	EIA	URINE	50 ng/mL
OXYTOCIN	ELISA	PLASMA	1.5 pg/mL
TESTOSTERONE	GC/MS	PLASMA	0.05 ng/ml
TESTOSTERONE	RIA	PLASMA	0.1 nmol/l
TESTOSTERONE + DIHYDROTESTERONE	LC/MS/MS	PLASMA	10 // 5 pg/mL

NEPHROPATHY

COMPOUND	TECHNIQUE	MATRIX	LLOQ
a-GLUTATHION S-TRANSFERASE	EIA	URINE	1.25 μ g/l
b2-MICROGLOBULIN	RIA	URINE	0.1 μ g/l
CREATININE	Spectro	URINE	4,07 mg/dl
N ACETYL β D GLUCOSAMINIDASE	COLORIMETRY	URINE	
p-GLUTATHION S-TRANSFERASE	EIA	URINE	3.12 μ g/l

ONCOLOGY

COMPOUND	TECHNIQUE	MATRIX	LLOQ
TIMP-1	EIA	PLASMA	1.56 ng/mL
VEGF-A	EIA	SERUM	15.6 pg/mL

BIOMARKERS

THYROID

COMPOUND	TECHNIQUE	MATRIX	LLOQ
LEVOTHYROXIN	SEE T4		
rhPTH	EIA	PLASMA	18 pg/mL
T3 (free) LIOTHYRONINE	RIA	SERUM	0.9 pg/ml
T3 (total) LIOTHYRONINE	RIA	SERUM	0.55 ng/ml
T4 (free) LEVOTHYROXINE	RIA	SERUM	5 pg/ml
T4 (total) LEVOTHYROXINE	RIA	SERUM	24 ng/ml
THYROTROPHIN	SEE TSH		
TSH (THYROTROPHIN)	RIA	SERUM	0.17 µiu/ml

WOMEN'S HEALTH

COMPOUND	TECHNIQUE	MATRIX	LLOQ
ESTRADIOL / ESTRONE / NORETHISTERONE	LC/MS/MS	SERUM	estradiol/estrone 5 g/MI - norethisterone 50 pg/MI
ESTRADIOL	RIA	PLASMA	20 pg/ml
ESTRADIOL	RIA	RAT PLASMA	200 pg/ml
ESTRADIOL	RIA	PLASMA, SERUM WITH	10 pg/ml
ESTRADIOL	LC/MS/MS	PLASMA	2 pg/mL
ESTRADIOL / ESTRONE	GC/MS	PLASMA	10 pg/ml
ESTRADIOL / ESTRONE	GC/MS	MONKEY PLASMA	40 pg/ml var. rge
ESTRADIOL / ESTRONE	GC/MS	MOUSE PLASMA	100 pg/ml var.rge
ESTRIOL	GC/MS	PLASMA	10 pg/ml
ESTRONE	SEE ESTRADIOL		
ESTRONE SULFATE	LC/MS/MS	PLASMA	0.05 ng/ml
ESTRONE SULFATE	RIA	PLASMA	0-75 ng/ml
FOLLICLE-STIMULATING HORMONE (FSH)	RIA	PLASMA	0.99 miu/ml
FSH	RIA	SERUM	0.5 mIU/mL
LH	RIA	SERUM	0.5 mIU/mL
LH	RIA	SERUM (rat)	0.5 mIU/mL
LUTEINIZING HORMONE (LH)	RIA	PLASMA	0.8 miu/ml
MEDROGESTONE + 6 METABOLITES	HPLC/UV	URINE	50 ng/ml for most
MEDROGESTONE + METABOLITE	GC/MS	PLASMA	0.1 // 1 ng/ml
MEDROXYPROGESTERONE	LC/MS/MS	PLASMA	0.1 ng/ml
NORETHINDRONE	SEE NORETHISTERON		
NORETHISTERONE	GC/MS	PLASMA	0.1 ng/ml // 10 pg/ml
NORETHISTERONE	GC/MS	RABBIT PLASMA	0.1 ng/ml
OXYTOCIN	ELISA	PLASMA	1.5 pg/mL
PROGESTERONE	RIA	PLASMA	0.04 ng/ml
PROGESTERONE	HPLC/RIA	PLASMA	0.1 ng/ml
PROGESTERONE	LC/MS/MS	PLASMA	0.2 ng/ml
PROMEGESTONE	LC/MS/MS	PLASMA	0.10 ng/ml
STEROID HORMONE BINDING GLOBULIN (SHBG)	RIA	PLASMA	0.5 nmol/l