

Werfen is a global, family-owned, diagnostics company focused in providing innovative specialized diagnostic solutions to improve patient healthcare, founded in 1966 in Barcelona, Spain.

Our OEM Technology Center has consolidated experience in research, development and manufacturing of customized assays and biomaterials.

We offer end-to-end solutions for the IVD industry with the most innovative capabilities to enhance competitiveness and time-to-market.

Our mission is to become your partner of choice as a center of excellence in providing innovative end-to-end OEM solutions (products & services) to IVD companies.



#### **Innovation**

Our OEM Technology Center ranks among the top centers of excellence for immunoassay and biomaterial development and manufacturing in the industry. Our focus on technological advances ensures our customers access to state-of-the-art R&D and manufacturing capabilities. Werfen's innovative nature is strengthened through close relationships with prestigious universities and biotechnology research centers around the world.

#### **Operational Excellence**

Our key strength is the combination of the ongoing effort to improve our organizational processes, products and services with the Werfen mindset that embraces principles and tools to create a sustainable partnership with our customers and employees.

Our Quality System is certified to ISO 13485:2016 / EN ISO 13485:2016 as well as MDSAP.

#### **Commitment**

Customers and patients benefit from the efficiency of a talented global team of qualified and specialized professionals who lend their enthusiasm, dedication and energy on a daily basis in order to provide high quality products & services.









#### **Acronym List**

A <sub>280</sub>	Absorbance at 280 nm
Ab	Antibody
Ag	Antigen
aHBs	Anti-Hepatitis B Surface
ASO	Anti-Streptolysin O
СНО	Chinese Hamster Ovary
CL	Chemiluminescence
ELISA	Enzyme-Linked ImmunoSorbent Assay
GMP	Good Manufacturing Practices
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HEPES	N-2-hydroxyethylpiperazine-N- 2-ethane sulfonic acid

HEV	Hepatitis E Virus
HPLC	High Performance Liquid Chromatography
HTLV	Human T-lymphotropic Virus
IBES	Improved Baculovirus Expression System
IVD	In Vitro Diagnostics
mAb	Monoclonal Antibody
MES	2-(N-morpholino)ethanesulfonic acid
NTE	NaCI-Tris-EDTA buffer
pAb	Polyclonal Antibody
PBS	Phosphate-Buffered Saline
PIGF	Placental Growth Factor
Rec	Recombinant
sFlt-1	Soluble "FMS" like tyrosine kinase

# Biomaterials for the IVD Industry

Werfen offers a broad range of biomaterials, including antigens, antibodies, obtained by following validated standards of quality procedures. Those procedures ensure the traceability, reproducibility and robustness of every single product. Our expertise is attested to by more than 200 biomaterials that are being used in diagnostic technologies.

Our know-how in biomaterials is focused on their application in commercial diagnostic assays that provides a low-risk, reliable and highly successful option for our customers to reduce time to market in their developments and secure their operations.

# Biomaterials Manufacturing Capabilities

**Purification Technologies** Protein extraction by salt **Expression Systems** precipitation Mammalian cell lines Density gradient ultracentrifugation Insect cell lines Tangential flow filtration IBES<sup>®</sup>\* / CrisBio™ Preparatory Chromatography Yeast Analytical Characterization\* **Bacterial** Quantification Purity Hybridoma MW Determination & pl \*IBES® (Improved Primary structure Baculovirus Expression System). Aggregation IBES® and CrisBio™ Technologies licensed Thermal stability by ALGENEX S.L. Glycosilation Charged variants Affinity constant Interaction kinetics Thanks to our OEM partnering culture we High order structures have a vast experience of meeting our customers needs and their regulatory \*This table compiles all the available analytical requirements in order to commercialize

characterization methodologies. Depending on the biomaterial, there are methodologies

applied on routine or upon request

their products worldwide.



Werfen is your OEM partner with state-of-the-art manufacturing capabilities to have the supply of critical biomaterials that cover market needs in a continuous, reliable and low-risk manner securing your operations.

#### **CAPABILITIES**

- 38,000 m² (409,028 ft²) facilities of which 10,000 m² (107,639 ft²) are dedicated to production activities
- Extensive manufacturing scale-up capabilities
- Biosafety level 2 laboratories
- Positive and negative pressurized laboratories
- State-of-the-art equipment: Bioreactors, AKTA Systems among others
- ISO 8 classified areas for production and filling
- Production under GMP's procedures
- Production under Lean Manufacturing
- 5S methodology implemented in all the production areas
- Final QC functional and physicochemical analysis

# Biomaterials Applications\*

Fertility			Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Monoclonal Antibodies	p. 10				
	Anti-Placental Growth Factor mAb (1)	1	•			
	Anti-Placental Growth Factor mAb (2)	1	•			
	Anti-sFtl-1 mAb (SFT10m)		•			
	Anti-sFtl-1 mAb (SFT18m)		•			
	Anti-17-OH Progesterone mAb (1)		•			
	Anti-17-OH Progesterone mAb (2)		•			
	AMH Antibody-Like protein		•			
Endocrinology						
	Monoclonal Antibodies	p. 13	•			
	Anti-Cortisol mAb (3)		•			
	Anti-Cortisol mAb (4)		•			
	Anti-human Growth Factor mAb (7)		•			
	Anti-human Growth FActor mAb (5)		•			
	Anti-Prolactin mAb (1)		•			
	Anti-Prolactin mAb (2)		•			
Bone Metabolis	sm					
	Monoclonal Antibodies	p. 15				
	Anti-Osteocalcin mAb (OST18m)		•			
	Anti-Osteocalcin mAb (OST24m)		•			
Cardiac						
	Recombinant Antibodies	p. 16				
	Anti-Troponin I rAb (1)			•		
	Anti-Troponin I rAb (2)					
	Anti-GDF-15 rAb (1)					
	Anti-GDF-15 rAb (2)					

<sup>\*</sup>Please note that this table is merely indicative. Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

Inflammation			Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	IL-6	p. 18				
	Recombinant Antibodies					
	Anti-IL-6 rAb (1)			•		
	Anti-IL-6 rAb (2)			•		
	ASO	p. 19				
	Recombinant Antigens					
	Recombinant Streptolysin O				•	•
	Recombinant Streptolysin O Stabi	lized			•	•
Hepatitis B						
	Native Antigens	p. 20				
	Hepatitis B Surface Antigen (ad S	ubtype)	•	•		
	Hepatitis B Surface Antigen (ay Si	ubtype)	•	•		
	Recombinant Antigens	p. 21				
	Recombinant HBc Antigen		•	•		
	Polyclonal Antibodies	p. 22				
	Anti-HBs Goat IgG pAb		•	•		
	Anti-HBs Guinea Pig IgG pAb		•	•		
	Monoclonal Antibodies	p. 23				
	Anti-HBs mAb (1DE2)					
Hepatitis C						
	Recombinant Antigens	p. 24				
	Recombinant HCV Capsid Polypep	tide	•	•		
	Recombinant HCV NS3 Polypeptid	e		•		
Hepatitis E						
	Recombinant Antigen	p. 25				
	Recombinant Hepatitis E Antigen		•			
					•	

<sup>\*</sup>Please note that this table is merely indicative. Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

Syphilis					
	Recombinant Antigens	p. 26			
	Recombinant p15 (II) Treponema pal	lidum Ag			
	Recombinant p17 Treponema pallidum Ag				
	Recombinant p47 Treponema pallido	um Ag			
	Recombinant H-p17 Treponema pali	lidum Ag			
	Recombinant H-p47 Treponema pali	lidum Ag			
Toxoplasma g	Toxoplasma gondii				
	Recombinant Antigen	p. 29			
	Recombinant Antigen Recombinant Toxoplasma Antigen	p. 29			
Rubella		p. 29			
Rubella		p. 29 p. 30			
Rubella	Recombinant Toxoplasma Antigen	p. 29 p. 30			
Rubella	Recombinant Toxoplasma Antigen  Native Antigens	p. 29 p. 30			
Rubella  Cytomegaloviru	Recombinant Toxoplasma Antigen  Native Antigens  Rubella Antigen Grade A  Rubella Antigen Grade B	p. 29 p. 30			
	Recombinant Toxoplasma Antigen  Native Antigens  Rubella Antigen Grade A  Rubella Antigen Grade B	p. 29 p. 30 p. 31			

Chamiluminassana	FLICA	Turbidim	Danid Tast
Chemiluminescence	ELISA	Turbidimetry	Rapid Test
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<sup>\*</sup>Please note that this table is merely indicative. Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

# Biomaterials Applications\*

Herpes		
	Recombinant Antigens	p. 32
	Recombinant gG1 Protein HSV-1	
	Recombinant gG2 Protein HSV-2	
Chagas		
	Recombinant Antigens	p. 33
	Recombinant TcF Antigen	
HTLV		
	Recombinant Antigen	p. 34
	Recombinant HTLV I/II Antigen	
Chikungunya		
	Recombinant Proteins	p. 35
	Recombinant Chikungunya glycoprotein	E1
	Recombinant Chikungunya glycoprotein	E2
Zika		
	Recombinant Proteins	p. 36
	Recombinant Zika NS1 Protein	
Rotavirus		
	Polyclonal Antibodies	- 27
	,	p. 37
	Anti-Rotavirus Rabbit IgG pAb	p. 37
Adenovirus	<u> </u>	p. 37
Adenovirus	<u> </u>	p. 37
Adenovirus	Anti-Rotavirus Rabbit IgG pAb	
Adenovirus	Anti-Rotavirus Rabbit IgG pAb  Monoclonal Antibodies	
Adenovirus Secondary Antibo	Anti-Rotavirus Rabbit IgG pAb  Monoclonal Antibodies  Anti-Adenovirus mAb (2/6)  Anti-Adenovirus mAb (20/11)	
	Anti-Rotavirus Rabbit IgG pAb  Monoclonal Antibodies  Anti-Adenovirus mAb (2/6)  Anti-Adenovirus mAb (20/11)	
	Anti-Rotavirus Rabbit IgG pAb  Monoclonal Antibodies  Anti-Adenovirus mAb (2/6)  Anti-Adenovirus mAb (20/11)  odies	p. 38

Chemiluminescence	ELISA	Turbidimetry	Rapid Test
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	•		•
	•		•
•			
•			

<sup>\*</sup>Please note that this table is merely indicative. Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

# **Fertility**

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Fertility			
	Monoclonal Antibodies		
	Anti-Placental Growth Factor mAb (1)		
Anti-Placental Growth Factor mAb (2)			
Anti-sFlt-1 mAb (1)			
	Anti-sFlt-1 mAb (2)		
	Anti-17-OH Progesterone mAb (1)		
	Anti-17-OH Progesterone mAb (2)		
	AMH Antibody-Like protein		

Chemiluminescence	ELISA	Turbidimetry	Rapid Test
•			
•			
•			
•			
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•			
		*	

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Placental Growth Factor mAb (1)	mg/custom size	3000-7060	-70°C*
Anti-Placental Growth Factor mAb (2)	mg/custom size	3000-7061	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Source Storage Buffer Purification Method Protein Concentration Preservative Hybridoma cell line 50 mM MES, 150 mM NaCl, pH 6 Protein A 1 mg /mL  $(A_{280})$  No Preservative Added

Product Description	Presentation	Reference	Storage
Anti-sFtl-1 mAb (SFT10m)	mg/custom size	3000-7062	-70°C*
Anti-sFlt-1 mAb (SFT18m)	mg/custom size	3000-7063	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

**Source** Hybridoma cell line

**Storage Buffer** 50 mM MES, 150 mM, NaCl, pH 6

Purification Method Protein A

**Protein Concentration** 1 mg /mL  $(A_{280})$ 

Preservative No Preservative Added

Product Description	Presentation	Reference	Storage
Anti-17-OH Progesterone mAb (1)	mg/custom size	3000-5320	-70°C*
Anti-17-OH Progesterone mAb (2)	mg/custom size	3000-5317	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

**Source** Hybridoma cell line

**Storage Buffer** PBS, pH 7.4 **Purification Method** Protein G

Product Description	Presentation	Reference	Storage
AMH Antibody-Like protein	mg/custom size	3000-7075	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Source Escherichia coli Storage Buffer Citrate, NaCl, pH 6.5 **Purification Method** Affinity chromatography **Protein Concentration** 1mg/mL 0,2% Azide Preservative

# Endocrinology

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Endocrinology	Chemiluminescence	ELISA	Turbidimetry	Rapid Test
Monoclonal Antibodies				
Anti-Cortisol mAb (3)	•			
Anti-Cortisol mAb (4)	•			
Anti-hGH mAb (7)	•			
Anti-hGH mAb (5)	•			
Anti-Prolactin mAb (1)	•			
Anti-Prolactin mAb (2)	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Cortisol mAb (3)	mg/custom size	3000-5315	-70°C*
Anti-Cortisol mAb (4)	mg/custom size	3000-5318	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Source Hybridoma cell line

Storage Buffer PBS, pH 7.4

Purification Method Protein G

Protein Concentration 1 mg /mL (A<sub>280</sub>)

Preservative No Preservative Added

Product Description	Presentation	Reference	Storage	
Anti-hGH mAb (7)	mg/custom size	3000-5316	-70°C*	
Anti-hGH mAb (5)	mg/custom size	3000-5319	-70°C*	

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Hybridoma cell line Source

PBS, pH 7.4 **Storage Buffer Purification Method** Protein G

**Protein Concentration** 

1 mg /mL (A<sub>280</sub>) No Preservative Added **Preservative** 

Product Description	Presentation	Reference	Storage
Anti-Prolactin mAb (1)	mg/custom size	3421-0000	-70°C*
Anti-Prolactin mAb (2)	mg/custom size	3421-0001	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Hybridoma cell line Source

PBS, pH 7.4 **Storage Buffer Purification Method** Protein G

0.50 mg/mL (A<sub>280</sub>) **Protein Concentration** No Preservative Added **Preservative** 

# Bone Metabolism

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Bone Metabolism		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
N	Monoclonal Antibodies				
P	Anti-Osteocalcin mAb (OST18m)	•			
	Anti-Osteocalcin mAb (OST24m)	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Osteocalcin mAb (OST18m)	mg/custom size	3000-7072	-70°C*
Anti-Osteocalcin mAb (OST24m)	mg/custom size	3000-7072	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

**Source** Hybridoma cell line

**Storage Buffer** MES, pH 6

**Purification Method** Protein A affinity chromatography

**Protein Concentration** 0.8-1mg/mL

# Cardiac

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Cardiac		Chemiluminescence	ELISA	Turbidimetry	Ra
	Recombinant Antibodies				
	Anti-Troponin I rAb (1)		•		
	Anti-Troponin I rAb (2)				
	Anti-GDF-15 rAb (1)				
	Anti-GDF-15 rAb (2)				

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Antibodies

Product Description	Presentation	Reference	Storage
Anti-Troponin I rAb (1)	mg/custom size	3421-0004	2-8°C
Anti-Troponin I rAb (2)	mg/custom size	3421-0005	2-8°C

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability.

#### **Details**

**Source** CHO-based cell line

Storage BufferPBS, pH 7.4Purification MethodProtein AProtein Concentration1mg/mL

Product Description	Presentation	Reference	Storage
Anti-GDF-15 rAb (1)	mg/custom size	3421-0002	2-8°C
Anti-GDF-15 rAb (2)	mg/custom size	3421-0003	2-8°C

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability.

#### **Details**

Source CHO-based cell line

**Storage Buffer** PBS, pH 7.4 **Purification Method** Protein A **Protein Concentration** 1mg/mL



# **Inflammation**

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Inflammation			Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	IL-6					
	Recombinant Antibodies					
	Anti-IL-6 rAb (1)			•		
	Anti-IL-6 rAb (2)			•		
	ASO	-				
	Recombinant Antigens	•				
	Recombinant Streptolysin O				•	•
	Recombinant Streptolysin O Stabilized				•	•

Other uses may be applicable depending on customer use. For further technical information or requests please contact OEM@werfen.com.

# *IL-6*

### Recombinant Antibodies

Product Description	Presentation	Reference	Storage
Anti-IL-6 rAb (1)	mg/custom size	3421-0006	2-8°C
Anti-IL-6 rAb (2)	mg/custom size	3421-0007	2-8°C

These producs are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability.

#### **Details**

**Source** CHO-based cell line

Storage BufferPBS, pH 7.4Purification MethodProtein AProtein Concentration1mg/mL

# **ASO**

# Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant Streptolysin O	mg/custom size*	3000-5258	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceEscerichia coliStorage BufferTris-HCI, pH 8.5

Purification Method Metal Affinity Chromatography
Protein Concentration 2-4 mg/mL (A<sub>200</sub> x 0.79)

**Protein Concentration** 2-4 mg/mL (A<sub>280</sub> x 0.79) **Preservative** No Preservative Added

Product Description	Presentation	Reference	Storage
Recombinant Streptolysin O stabilized	1mg/mL	3000-5311	-70°C**
Recombinant Streptolysin O stabilized	mg/custom size*	3000-5259	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceEscerichia coliStorage BufferTris-HCI, pH 8.2

Purification MethodMetal Affinity ChromatographyProtein Concentration1-2 mg/mL (Lowry Method)PreservativeNo Preservative Added

# Infectious Diseases Hepatitis B

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Hepatitis B		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Native Antigens	_			
	Hepatitis B Surface Antigen (ad Subtype)	•	•		
	Hepatitis B Surface Antigen (ay Subtype)	•	•		
	Recombinant Antigens				
	Recombinant HBc Antigen	•	•		
	Polyclonal Antibodies				
	Anti-HBs Rabbit IgG pAb		•		
	Anti-HBs Goat IgG pAb	•	•		
	Anti-HBs Guinea Pig IgG pAb	•	•		
	Anti-rHBc Rabbit IgG pAb	•	•		
	Monoclonal Antibodies				
	Anti-HBs mAb (1DE2)				

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

## Native Antigens

Product Description	Presentation	Reference	Storage
Hepatitis B Surface Antigen (ad Subtype)	1 mg/vial	3000-5201	-20°C**
Hepatitis B Surface Antigen (ad Subtype)	mg/custom size*	3000-5200	-20°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Human plasma
Storage Buffer PBS, pH 7.4
Purification Method Ultracentrifugation
Protein Concentration 2-3 mg/mL (A<sub>280</sub> / 3.726)
Preservative No Preservative Added

Product Description	Presentation	Reference	Storage
Hepatitis B Surface Antigen (ay Subtype)	1 mg/vial	3000-5199	-20°C**
Hepatitis B Surface Antigen (ay Subtype)	mg/custom size*	3000-5198	-20°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceHuman plasmaStorage BufferPBS, pH 7.4Purification MethodUltracentrifugationProtein Concentration2-3 mg/mL (A280 / 3.726)PreservativeNo Preservative Added

## Recombinant Antigens

Product Description	Presentation	Presentation Reference		
Recombinant HBc Antigen	1 mg/vial	3000-5100	-20°C**	
Recombinant HBc Antigen	mg/custom size*	3000-5102	-20°C**	

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceEscherichia coliStorage BufferPBS, pH 7.4Purification MethodUltracentrifugation

**Protein Concentration** 0.2-1.0 mg/mL (Lowry Method)

# Polyclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-HBs Goat IgG pAb	5 mg/vial	3000-5501	2-8°C
Anti-HBs Goat IgG pAb	mg/custom size*	3000-5502	2-8°C

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 10 mg/vial.

#### **Specifications**

**Source** Goat Serum Storage Buffer Carbonate, pH 9.5

Purification Method Immunoaffinity Chromatography

 $\begin{array}{ll} \textbf{Protein Concentration} & 1\text{--}3 \text{ mg/mL } (A_{280} \text{ / } 0.71) \\ \textbf{Preservative} & \text{No Preservative Added} \end{array}$ 

Product Description	Presentation	Reference	Storage
Anti-HBs Guinea Pig IgG pAb	5 mg/vial	3000-5264	2-8°C
Anti-HBs Guinea Pig IgG pAb	mg/custom size*	3000-5265	2-8°C

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 10 mg/vial.

#### **Specifications**

**Source** Guinea Pig Serum

Storage Buffer PBS

 $\begin{array}{ll} \textbf{Purification Method} & Immunoaffinity Chromatography \\ \textbf{Protein Concentration} & 0.5\text{-}2.0 \text{ mg/mL } (\text{A}_{280} \text{ / } 0.78) \\ \textbf{Preservative} & < 0.1\% \text{ Sodium Azide} \\ \end{array}$ 

### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-HBs mAb (1DE2)	50 mg/custom size*	3000-5012	-70°C**
Anti-HBs mAb (1DE2)	1mg/vial	3000-5011	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum order 50 mg and minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Isotype
Source
Storage Buffer
Purification Method
Protein Concentration
Preservative

Mouse IgG1 Kappa Hybridoma Cell Line Citrate, 0.1M, pH 7.5 Affinity Chromatography 2-6 mg/mL (A<sub>280</sub> / 0.71) No Preservative Added



# Hepatitis C

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Hepatitis C		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Recombinant Antigens				
	Recombinant HCV Capsid Polypeptide	•	•		
	Recombinant HCV NS3 Polypeptide	•	•		

Other uses may be applicable depending on customer use. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Antigens

Product Description	Presentation Reference		Storage
Recombinant HCV Capsid Polypeptide	mg/custom size*	3000-5103	-70°C**
Recombinant HCV Capsid Polypeptide	1mg/vial	3000-5314	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Escherichia coli Storage Buffer Acetate, NaCl, pH 5.5

Purification Method Ion Exchange Chromatography

**Protein Concentration** 0.5-2.0 mg/mL (A<sub>280</sub>) **Preservative** No Preservative Added

Product Description	Presentation	Reference	Storage
Recombinant HCV NS3 Polypeptide	mg/custom size*	3000-5104	-70°C**
Recombinant HCV NS3 Polypeptide	1mg/vial	3000-5105	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Escherichia coli

Storage Buffer Tris-HCI, NaCl, pH 8.6

Purification Method Affinity Chromatography

Protein Concentration 0.5-2.0 mg/mL (A<sub>280</sub>)

Preservative No Preservative Added

# Hepatitis E

The following products have been reported to work in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Hepatitis E	Antigen	Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Recombinant Antigens				
	Recombinant HEV Ag	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

# Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant HEV Ag	mg/custom size*	3000-5326	-70°C**
Recombinant HEV Ag	1 mg/vial	3000-5326	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Escherichia coli

Storage Buffer MES, NaCl, pH 6.4

Purification Method Affinity Chromatography

Protein Concentration 2.5-4.00 mg/mL (A<sub>280</sub>)

Preservative No Preservative Added

# **Syphilis**

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Syphilis	Antigen
	Recombinant Antigens
	Recombinant p15 (II) Treponema pallidum Ag
	Recombinant p17 Treponema pallidum Ag
	Recombinant p47 Treponema pallidum Ag
	Recombinant H-p17 Treponema pallidum Ag
	Recombinant H-p47 Treponema pallidum Ag

Chemiluminescence	ELISA	Turbidimetry	Rapid Test
•	•		
•	•		
•	•		
•	•		
•	•		

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant p15 (II) Treponema pallidum Ag	mg/custom size*	3000-5289	-70°C**
Recombinant p15 (II) <i>Treponema pallidum</i> Ag	1mg/vial	3000-5306	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

TagGSTSourceEscherStorage BufferTris-HePurification MethodAffinityProtein Concentration3-7 mgPreservativeNo Preservative

GST Escherichia coli Tris-HCI, NaCl, pH 8.0 Affinity Chromatography 3-7 mg/mL (A<sub>280</sub> x 0.74) No Preservative Added

Product Description	Presentation	resentation Reference	
Recombinant p17 Treponema pallidum Ag	mg/custom size*	3000-5280	-70°C**
Recombinant p17 <i>Treponema pallidum</i> Ag	1mg/vial	3000-5305	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 2 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Tag **GST** 

Source Escherichia coli

Storage Buffer Tris-HCI, NaCl, pH 8.0 Affinity Chromatography **Purification Method** 8-12 mg/mL (A<sub>280</sub> x 0.78) **Protein Concentration** No Preservative Added **Preservative** 

Product Description	Presentation Reference		Storage
Recombinant p47 Treponema pallidum Ag	mg/custom size*	3000-5284	-70°C**
Recombinant p47 <i>Treponema pallidum</i> Ag	1mg/vial	3000-5307	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

**GST** Tag

Source Escherichia coli

Storage Buffer Tris-HCI, NaCl, pH 8.0 **Purification Method** Affinity Chromatography 4-6 mg/mL ( $A_{280} \times 0.8$ ) **Protein Concentration** No Preservative Added **Preservative** 

Product Description	Presentation	Reference	Storage
Recombinant H-p17 <i>Treponema pallidum</i> Ag	mg/custom size*	3000-5254	-70°C**
Recombinant H-p17 <i>Treponema pallidum</i> Ag	1mg/vial	3000-5308	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Tag HIS

**Source** Escherichia coli

**Storage Buffer** Tris-HCI, NaCl, pH 8.0

**Purification Method** Metal Affinity Chromatography

Protein Concentration $2-5 \text{ mg/mL (A}_{280} \times 1.38)$ PreservativeNo Preservative Added

Product Description	Presentation	Reference	Storage
Recombinant H-p47 Treponema pallidum Ag	mg/custom size*	3000-5263	-70°C**
Recombinant H-p47 <i>Treponema pallidum</i> Ag	1mg/vial	3000-5309	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Tag HIS

**Source** Escherichia coli

**Storage Buffer** Tris-HCI, NaCl, pH 8.0

Purification MethodMetal Affinity ChromatographyProtein Concentration2-5 mg/mL (A280 x 0.91)PreservativeNo Preservative Added

# Toxoplasma

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Toxoplasma		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Recombinant Antigen				
	Recombinant Toxoplasma Antigen	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

## Recombinant Toxoplasma Antigen

Product Description	Presentation	Reference	Storage
Recombinant Toxoplasma Antigen	mg/custom size	3000-7074	-70°C*

This product is in R&D Stage and is for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

SourceEscherichia coliStorage BufferSodium Bicarbonate, Sodium Carbonate pH 9.6Purification MethodAffinity chromatographyProtein Concentration1 mg /mL

# Rubella Virus

The following products have been reported to work in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Rubella			Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Native Antigens	•				
	Rubella Antigen Grade A		•	•	•	
	Rubella Antigen Grade B					•

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Native Antigens

Product Description	Presentation	Reference	Storage
Rubella Antigen Grade A	1 mg/vial	3000-5202	-70°C**
Rubella Antigen Grade A	mg/custom size*	3000-5204	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

**Source** Tissue Culture (Virus Strain HPV-77)

Storage BufferSucrose/SDS/NTEPurification MethodUltracentrifugation

**Protein Concentration** 0.5-1.5 mg/mL (Modified Warburg-Christian Method)

**Preservative**No Preservative Added

Product Description	Presentation	Reference	Storage
Rubella Antigen Grade B	1 mg/vial	3000-5203	-70°C**
Rubella Antigen Grade B	mg/custom size*	3000-5205	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

**Source** Tissue Culture (Virus Strain HPV-77)

Storage BufferSucrose/SDS/NTEPurification MethodUltracentrifugation

**Protein Concentration** 0.1-0.5 mg/mL (Modified Warburg-Christian Method)

# Cytomegalovirus

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Cytomegalovirus	Chemiluminescence	ELISA	Turbidimetry	Rapid Test
Native Antigens				
Cytomegalovirus Antigen	•	•		

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

## Native Antigens

Product Description	Presentation	Reference	Storage
Cytomegalovirus Antigen#	mg/custom size*	3000-5260	-70°C**
Cytomegalovirus Antigen	1mg/vial	3000-5310	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Tissue Culture Storage Buffer NTE, pH 8.0

**Protein Concentration** 0.4-0.7 mg/mL (Modified Warburg-Christian Method)

<sup>\*</sup>Sonication is recommended prior to use.

# Herpes

The following products have been reported to work in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Rapid Test

Herpes		Chemiluminescence	ELISA	Turb
	Recombinant Antigens			
	Recombinant gG1 Protein HSV-1	 •	•	
	Recombinant gG2 Protein HSV-2	 •	•	

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant gG1 Protein HSV-1*	0.5 mg/vial	3000-5288	-70°C**
Recombinant gG1 Protein HSV-1*	mg/custom size*	3000-5279	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceTrichoplusia ni.Storage BufferHEPES, NaCl, pH 7.5

**Purification Method**Ion Exchange and Affinity Chromatography

Protein Concentration 0.5-2 mg/mL (A<sub>280</sub> x 6.95)
Preservative No Preservative Added

Product Description	Presentation	Reference	Storage
Recombinant gG2 Protein HSV-2*	0.5 mg/vial	3000-5282	-70°C**
Recombinant gG2 Protein HSV-2*	mg/custom size*	3000-5283	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Source Trichoplusia ni.

Storage Buffer HEPES, NaCl, pH 8.2

Purification Method Ion Exchange and Affinity Chromatography

Protein Concentration 0.8-1.5 mg/mL (A<sub>280</sub> x 5.45)
Preservative No Preservative Added

<sup>&</sup>lt;sup>#</sup>This product is manufactured using CrisBio<sup>™</sup> technology from ALGENEX S.L

<sup>&</sup>lt;sup>#</sup>This product is manufactured using CrisBio<sup>™</sup> technology from ALGENEX S.L.

# Chagas

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Chagas		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Recombinant Antigens				
	Recombinant TcF Antigen	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

# Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant TcF Ag	mg/custom size*	3000-5321	-70°C**
Recombinant TcF Ag	4mg/vial	3000-5322	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Details**

Source Escherichia coli
Storage Buffer Tris, NaCL, pH 8.0
Purification Method Chromatography

Protein Concentration 1-4 mg/mL (BCA method)
Preservative No Preservative Added



The following products have been reported to work in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

HTLV		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Recombinant Antigens				
	Recombinant HTLV Antigen	•			

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

No Preservative Added

## Recombinant Antigens

Product Description	Presentation	Reference	Storage
Recombinant HTLV Antigen	mg/custom size	3000-7066	-70°C*

These products are in R&D Stage and are for "Investigation / Research Use Only". The information contained in this catalogue is for informational purposes. Contact oem@werfen.com for further technical information and product availability. \*Avoid repeated freezing and thawing.

#### **Details**

Source Storage Buffer Purification Method Protein Concentration Preservative Escherichia coli
Sodium carbonate, NaCl, Glycerol, pH 9.3
Affinity chromatography
1 mg/mL

# Chikungunya

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Chikungunya		Chemiluminescence	ELISA
	Recombinant Proteins		
	Recombinant Chikungunya glycoprotein E1		•
	Recombinant Chikungunya glycoprotein E2		•

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Proteins

Product Description	Presentation	Reference	Storage
Recombinant Chikungunya glycoprotein E1	1mg/mL vial	3000-9000	≤65°C*
Recombinant Chikungunya glycoprotein E2	1mg/mL vial	3000-9001	≤65°C*

Contact oem@werfen.com for further information on geographical availability. \*Avoid repeated freezing and thawing.

#### **Specifications**

SourceInsect cell expression systemStorage BufferPhosphate, NaCL, pH 8.0 and GlycerolPurification MethodChromatographyProtein Concentration0.5-5.0 mg/mL (A280)PreservativeNo Preservative Added

Turbidimetry

Rapid Test



The following products have been reported to work in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Zika			Chemiluminescence	ELISA	Turbidimetry	Rapid Tes
	Recombinant Proteins					
	Recombinant Zika NS1 Protein	•		•		

Other uses may be applicable depending on customer needs. For further technical information or requests please contact OEM@werfen.com.

### Recombinant Proteins

Product Description	Presentation	Reference	Storage
Recombinant Zika NS1 Protein	1 mg/vial	3000-9002	≤65°C*

Contact oem@werfen.com for further information on geographical availability. \*Avoid repeated freezing and thawing.

#### **Specifications**

Source Insect cell expression system

Storage Buffer HEPES/NaOH, NaCl, pH 8.0 and Glycerol

Purification Method Chromatography

Protein Concentration 0.5–2.0 mg/ml (A.)

**Protein Concentration** 0.5–2.0 mg/mL (A<sub>280</sub>) **Preservative** No Preservative Added

# Rotavirus

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Rotavirus		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Polyclonal Antibodies				
	Anti-Rotavirus Rabbit IgG pAb		•		•

Other uses may be applicable depending on customer use. For further technical information or requests please contact OEM@werfen.com.

# Polyclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Rotavirus Rabbit IgG pAb	5 mg/vial	3000-5525	-20°C**
Anti-Rotavirus Rabbit IgG pAb	mg/custom size*	3000-5526	-20°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 10 mg/vial. Contact oem@werfen.com for further technical information and product availability. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

**Source** Rabbit Serum

**Storage Buffer** PBS with potassium chloride, pH 8.0

Purification Method Precipitation and Ion Exchange Chromatography

**Protein Concentration**  $5-15 \text{ mg/mL } (A_{280} \times 0.71)$ 

**Preservative** 0.05% Chloretone

# Adenovirus

The following products have been tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Adenovirus		Chemiluminescence	ELISA	Turbidimetry	Rapid Test
	Monoclonal Antibodies				
	Anti-Adenovirus mAb (2/6)		•		•
	Anti-Adenovirus mAb (20/11)		•		•

Other uses may be applicable depending on customer use. For further technical information or requests please contact OEM@werfen.com.

#### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Adenovirus mAb (2/6)	1mg/vial	3000-5312	-70°C**
Anti-Adenovirus mAb (2/6)	mg/custom size*	3000-5113	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum order 50 mg and minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

IsotypeMouse IgG1 KappaSourceCell CultureStorage BufferCitrate, pH 7.5

Product Description	Presentation	Reference	Storage
Anti-Adenovirus mAb (20/11)	1mg/vial	3000-5313	-70°C**
Anti-Adenovirus (20/11)	mg/custom size*	3000-5114	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum order 50 mg and minimum size 5 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

IsotypeMouse IgG1 KappaSourceCell CultureStorage BufferCitrate, pH 7.5

# Secondary Antibodies

The following products been have tested in the following applications. This information derives from use in commercial diagnostic assays and/or testing within our laboratories.

Secondary Antibodies	Chemiluminescence	ELISA	Turbidimetry	Rapid Test
Monoclonal Antibodies				
Anti-Human IgG mAb	•			
Anti-Human IgM mAb	•			

Other uses may be applicable depending on customer use. For further technical information or requests please contact OEM@werfen.com.

### Monoclonal Antibodies

Product Description	Presentation	Reference	Storage
Anti-Human IgG mAb	mg/custom size*	3000-5327	-70°C**
Anti-Human IgG mAb	1mg/vial	3000-5324	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

Product Description	Presentation	Reference	Storage
Anti-Human IgM mAb	mg/custom size*	3000-5328	-70°C**
Anti-Human IgM mAb	1mg/vial	3000-5325	-70°C**

<sup>\*</sup>For large quantities, packaging available upon request - minimum size 1 mg/vial. \*\*Avoid repeated freezing and thawing.

#### **Specifications**

SourceHybridoma Cell LineStorage BufferMES, NaCL, pH 6.0Purification MethodAffinity chromatographyProtein Concentration≥ 2.50 mg/ml ( $A_{280}$ )PreservativeNo Preservative Added



