Instructions for Use

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Human IL-12p70 ELISA

The Human IL-12p70 ELISA kit is a solid phase sandwich ELISA for the in-vitro qualitative and quantitative determination of IL-12p70 in supernatants, buffered solutions or serum and plasma samples. This assay will recognise both natural and recombinant human IL-12p70.

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Σ **96**

For illustrative purposes only.
To perform the assay the instructions for use provided with the kit have to be used.

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Human IL-12p70 ELISA KIT

1. Intended use

The Human IL-12p70 ELISA kit is a solid phase sandwich ELISA for the *in-vitro* qualitative and quantitative determination of IL-12p70 in supernatants, buffered solutions or serum and plasma samples. This assay will recognise both natural and recombinant human IL-12p70.

This kit has been configured for research use only. Not suitable for use in therapeutic procedures.

2. Introduction

2.1. Summary

IL-12 is a pleiotropic cytokine formely called cytotoxic lymphocyte maturation factor (CLMF) or natural killer cell stimulatory factor (NKSF). IL-12 is a potent regulator of cell mediated immune response produced by activated monocytes/macrophages cells, dendritics cells, neutrophils, B lymphocytes and connective tissue type mast cells. IL-12 is produced in response to bacterial products, intracellular pathogens, or upon interaction with activated T cells.
The biologically active form of IL-12 is a 70 kDa heterodimeric glycoprotein consisting of disulfide-linked 35 kDa (designated p35) light chain and 40 kDa (p40) heavy chain subunits. The p35 subunit has homology to IL-6, while p40 has homology with IL-23. The two subunits are genetically unrelated and are regulated independently: IL-12p40 is produced constitutively and in excess of p35.
The receptor for IL-12p70 is composed of two subunits, IL-12R beta 1 and IL-12R beta 2 which bind p40 and p35 subunits respectively. Through JAKS and STAT4 signaling pathway, IL-12 induces IFNγ production and increases proliferation and cytotoxic activity of T and NK cells. Moreover, IL-12 induces CD4+ polarization to the Th1 phenotype that mediates immunity against intracellular pathogens.

Aberrant level of IL-12 in plasma was described in several immune diseases: multiple sclerosis, autoimmune encephalitis, autoimmune subcutaneous lupus erythramatosus and rheumatoid arthritis. High level have also been reported for chronic inflammatory reactions, bacterial and viral infection (mycobacterial, salmonella, HIV).
Following these properties and its role in autoimmunity, IL-12 was described as a target in the treatment of autoimmune and systemic inflammatory diseases (Crohn's disease, Psoriasis, multiple sclerosis).

2.2. Principle of the method

A capture Antibody highly specific for IL-12p70 has been coated to the wells of the microtiter strip plate provided during manufacture. Binding of IL-12p70 samples and known standards to the capture antibodies and subsequent binding of the Biotinylated anti-IL-12p70 secondary antibody to the analyte is completed during the same incubation period. Any excess unbound analyte and secondary antibody is removed.
The HRP conjugate solution is then added to every well including the zero wells, following incubation excess conjugate is removed by careful washing.
A chromogen substrate is added to the wells resulting in the progressive development of a blue coloured complex with the conjugate. The colour development is then stopped by the addition of acid turning the resultant final product yellow. The intensity of the produced coloured complex is directly proportional to the concentration of IL-12p70 present in the samples and standards.
The absorbance of the colour complex is then measured and the generated OD values for each standard are plotted against expected concentration forming a standard curve. This standard curve can then be used to accurately determine the concentration of IL-12p70 in any sample tested.

3. Reagents provided and reconstitution

Reagents (Store@2-8ºC)	**Quantity 1x96-well kit**	**Reconstitution**
Anti-IL-12p70 Coated Plate	1	Ready to use (96-well strip pre-coated plate)
Plastic plate covers	2	n/a
IL-12p70 Standard: 200 pg/ml	2	Reconstitute as directed on the vial (see Assay preparation, section 8)
Standard Diluent (Buffer)	1 (15ml)	10x concentrate, dilute in distilled water (see Assay preparation, section 8)
Standard Diluent Serum	1 (7 ml)	Ready to use
IL-12p70 Control	2	Reconstitute as directed on the vial (see Assay preparation, section 8)
Biotinylated Anti-IL-12p70	1 (0.4ml)	Dilute in Biotinylated Antibody Diluent (see Assay preparation, section 8)
Biotinylated Antibody Diluent	1 (7ml)	Ready to use
Streptavidin-HRP	2 (5µl)	Add 0.5ml of Streptavidin-HRP Diluent prior to use (see Assay preparation, section 8)
Streptavidin-HRP Diluent	1 (12ml)	Ready to use
Wash Buffer	1 (10ml)	200x concentrate dilute in distilled water (see Assay preparation, section 8)
TMB Substrate	1 (11ml)	Ready to use
H_2SO_4 Stop Reagent	1 (11ml)	Ready to use

4. Materials required but not provided

- Microtiter plate reader fitted with appropriate filters (450 nm required with optional 620 nm reference filter)
- Microtiter plate washer or wash bottle
- 10, 50, 100, 200 and 1,000µl adjustable single channel micropipettes with disposable tips
- 50-300µl multi-channel micropipette with disposable tips
- Multichannel micropipette reagent reservoirs
- Distilled water
- Vortex mixer
- Miscellaneous laboratory plastic and/or glass, if possible sterile

5. Storage Instructions

Store kit reagents between 2 and 8°C. Immediately after use remaining reagents should be returned to cold storage (2-8°C). Expiry of the kit and reagents is stated on box front labels. The expiry of the kit components can only be guaranteed if the components are stored properly, and if, in case of repeated use of one component, the reagent is not contaminated by the first handling.

Wash Buffer 1X: Once prepared, store at 2-8°C for up to 1 week.

Standard Diluent Buffer 1X: Once prepared, store at 2-8°C for up to 1 week.

Reconstituted Standard/Control: Once prepared use immediately and do not store.

Diluted Biotinylated Anti-IL-12p70: Once prepared use immediately and do not store.

Diluted Streptavidin-HRP: Once prepared use immediately and do not store.

6. Specimen collection, processing & storage

Cell culture supernatants, human serum, plasma or other biological samples will be suitable for use in the assay. Remove serum from the clot or red cells, respectively, as soon as possible after clotting and separation.

Cell culture supernatants: Remove particulates and aggregates by spinning at approximately 1000 x g for 10 min.

Serum: Use pyrogen/endotoxin free collecting tubes. Serum should be removed rapidly and carefully from the red cells after clotting. Following clotting, centrifuge at approximately 1000 x g for 10 min and remove serum.

Plasma: EDTA, citrate and heparin plasma can be assayed. Spin samples at 1000 x g for 30 min to remove particulates. Harvest plasma.

Storage: If not analysed shortly after collection, samples should be aliquoted (250-500µl) to avoid repeated freeze-thaw cycles and stored frozen at –70°C. Avoid multiple freeze-thaw cycles of frozen specimens.

Recommendation: Do not thaw by heating at 37°C or 56°C. Thaw at room temperature and make sure that sample is completely thawed and homogeneous before use. When possible avoid use of badly haemolysed or lipemic sera. If large amounts of particles are present these should be removed prior to use by centrifugation or filtration.

7. Safety & precautions for use

- Handling of reagents, serum or plasma specimens should be in accordance with local safety procedures, e.g. CDC/NIH Health manual : "Biosafety in Microbiological and Biomedical Laboratories" 1984.
- Laboratory gloves should be worn at all times.
- Avoid any skin contact with H_2SO_4 and TMB. In case of contact, wash thoroughly with water.
- Do not eat, drink, smoke or apply cosmetics where kit reagents are used.
- Do not pipette by mouth.
- When not in use, kit components should be stored refrigerated as indicated on vials or bottles labels.
- All reagents should be warmed to room temperature before use. Lyophilized standards should be discarded after use.
- Once the desired number of strips has been removed, immediately reseal the bag to protect the remaining strips from deterioration.
- Cover or cap all reagents when not in use.
- Do not mix or interchange reagents between different lots.
- Do not use reagents beyond the expiration date of the kit.
- Use a clean disposable plastic pipette tip for each reagent, standard, or specimen addition in order to avoid cross contamination, for the dispensing of H_2SO_4 and TMB Substrate solutions, avoid pipettes with metal parts.
- Use a clean plastic container to prepare the washing solution.
- Thoroughly mix the reagents and samples before use by agitation or swirling.
- All residual washing liquid must be drained from the wells by efficient aspiration or by decantation followed by tapping the plate forcefully on absorbent paper. Never insert absorbent paper directly into the wells.
- The TMB Substrate solution is light sensitive. Avoid prolonged exposure to light. Also, avoid contact of the TMB Substrate solution with metal to prevent colour development. Warning TMB Substrate is toxic avoid direct contact with hands. Dispose off properly.
- If a dark blue colour develops within a few minutes after preparation, this indicates that the TMB solution has been contaminated and must be discarded. Read absorbances within 1 hour after completion of the assay.
- When pipetting reagents, maintain a consistent order of addition from well-to-well. This will ensure equal incubation times for all wells.
- Follow incubation times described in the assay procedure.
- Dispense the TMB Substrate within 15 min of the washing of the microtiter plate.

8. Assay Preparation

Bring all reagents to room temperature before use

8.1. Assay Design

Determine the number of microwell strips required to test the desired number of samples plus appropriate number of wells needed for running zeros and standards. Each sample, standard, zero and control should be tested **in duplicate**. Remove sufficient microwell strips for testing from the pouch immediately prior to use. Return any wells not required for this assay with desiccant to the pouch. Seal tightly and return to 2-8ºC storage.

Example plate layout (example shown for a 6 point standard curve)

	Standards / Controls		Sample Wells									
	1	2	3	4	5	6	7	8	9	10	11	12
A	200	200										
B	100	100										
C	50	50										
D	25	25										
E	12.5	12.5										
F	6.25	6.25										
G	zero	zero										
H	Ctrl	Ctrl										

All remaining empty wells can be used to test samples in duplicate

8.2. Preparation of Wash Buffer

If crystals have formed in the concentrate Wash Buffer, warm it gently until complete dissolution.

Dilute the (200X) concentrate Wash Buffer 200 fold with distilled water to give a 1X working solution. Pour entire contents (10 ml) of the concentrate Wash Buffer into a clean 2,000 ml graduated cylinder. Bring final volume to 2,000 ml with glass-distilled or deionized water. Mix gently to avoid foaming. Transfer to a clean wash bottle.

8.3. Preparation of Standard Diluent Buffer 1X

If crystals have formed in the concentrate Standard Diluent, warm it gently until complete dissolution.

Dilute the (10X) concentrate Standard Diluent 10 fold with distilled water to give a 1X working solution. Pour entire contents of the concentrate Standard Diluent into a clean appropriate graduated cylinder. Bring to final volume with glass-distilled or deionized water. Transfer to a clean wash bottle.
Please see example volumes below:

Standard Diluent concentrate (ml)	Distilled water (ml)
15	135
25	225

8.4. Preparation of Standard

Depending on the type of samples you are assaying, the kit may include two Standard Diluents. Because biological fluids might contain proteases or cytokine-binding proteins that could modify the recognition of the cytokine you want to measure, you should reconstitute standard vials with the most appropriate Standard Diluent.

For **serum and plasma** samples: use Standard Diluent - Serum
For **cell culture supernatants:** use Standard Diluent Buffer 1X

Standard vials must be reconstituted with the volume of Standard Diluent shown on the vial immediately prior to use. This reconstitution gives a stock solution of 200 pg/ml of IL-12p70. Mix the reconstituted standard gently by inversion only. Serial dilutions of the standard are made directly in the assay plate to provide the concentration range from 200 to 6.25 pg/ml. A fresh standard curve should be produced for each new assay.

- Immediately after reconstitution add 200µl of the reconstituted standard to wells A1 and A2, which provides the highest concentration standard at 200 pg/ml.
- Add 100µl of Standard Diluent to the remaining standard wells B1 and B2 to F1 and F2.
- Transfer 100µl from wells A1 and A2 to B1 and B2. Mix the well contents by repeated aspirations and ejections taking care not to scratch the inner surface of the wells.
- Continue this 1:1 dilution using 100µl from wells B1 and B2 through to wells F1 and F2 providing a serial diluted standard curve ranging from 200 pg/ml to 6.25 pg/ml.
- Discard 100µl from the final wells of the standard curve (F1 and F2).

Alternatively these dilutions can be performed in separate clean tubes and immediately transferred into the relevant wells.

8.5. Preparation of Control

Freeze-dried control vials should also be reconstituted with the most appropriate Standard Diluent to your samples.

For **serum and plasma** samples: use Standard Diluent - Serum
For **cells culture supernatants:** use Standard Diluent Buffer 1X

The supplied Control must be reconstituted with the volume of Standard Diluent Buffer 1X indicated on the vial. Reconstitution of the freeze-dried material with the indicated volume, will give a solution at the concentration stated on the vial. Do not store after use.

8.6. Preparation of Biotinylated Anti-IL-12p70

It is recommended this reagent is prepared immediately before use. Dilute the Biotinylated Anti-IL-12p70 with the Biotinylated Antibody Diluent in an appropriate clean glass vial using volumes appropriate to the number of required wells. Please see example volumes below:

Number of wells required	Biotinylated Antibody (µl)	Biotinylated Antibody Diluent (µl)
16	40	1060
24	60	1590
32	80	2120
48	120	3180
96	240	6360

8.7. Preparation of Streptavidin-HRP

It is recommended to centrifuge vial for a few seconds in a microcentrifuge to collect all the volume at the bottom.

Dilute the 5µl vial with 0.5ml of Streptavidin-HRP Diluent **immediately before use.** Do not keep this diluted vial for future experiments. Further dilute the HRP solution to volumes appropriate for the number of required wells in a clean glass vial. Please see example volumes below:

Number of wells required	Streptavidin-HRP (µl)	Streptavidin-HRP Diluent (ml)
16	30	2
24	45	3
32	60	4
48	75	5
96	150	10

9. Method

We strongly recommend that every vial is mixed thoroughly without foaming prior to use.

Prepare all reagents as shown in section 8.
Note: final preparation of Biotinylated Antibody (section 8.6) and Streptavidin-HRP (section 8.7) should occur immediately before use.

Assay Step		Details
1.	Addition	**Prepare standard curve** as shown in section 8.4 above and add in duplicate to appropriate wells
2.	Addition	Add 100µl of each **Sample, Control and zero (appropriate Standard Diluent)** in duplicate to appropriate number of wells
3.	Addition	Add 50µl of diluted **Biotinylated Anti-IL-12p70** to all wells
4.	Incubation	Cover with a plastic plate cover and incubate at room temperature (18 to 25°C) for **3 hours**
5.	Wash	Remove the cover and wash the plate as follows: a) Aspirate the liquid from each well b) Dispense 0.3 ml of **1x Wash Buffer** into each well c) Aspirate the contents of each well d) Repeat step b and c another two times
6.	Addition	Add 100µl of diluted **Streptavidin-HRP** solution into all wells
7.	Incubation	Cover with a plastic plate cover and incubate at room temperature (18 to 25°C) for **30 min**
8.	Wash	Repeat wash step 5.
9.	Addition	Add 100µl of ready-to-use **TMB Substrate** into all wells
10.	Incubation	Incubate in the dark for **10-15 minutes*** at room temperature. Avoid direct exposure to light by wrapping the plate in aluminium foil.
11.	Addition	Add 100µl of **H_2SO_4 Stop Reagent** into all wells
Read the absorbance value of each well (immediately after step 11.) on a spectrophotometer using 450 nm as the primary wavelength and optionally 620 nm as the reference wave length (610 nm to 650 nm is acceptable).		

** Incubation time of the TMB substrate is usually determined by the ELISA reader performance. Many ELISA readers only record absorbance up to 2.0 O.D. Therefore the colour development within individual microwells must be observed by the analyst, and the substrate reaction stopped before positive wells are no longer within recordable range.*

10. Data Analysis

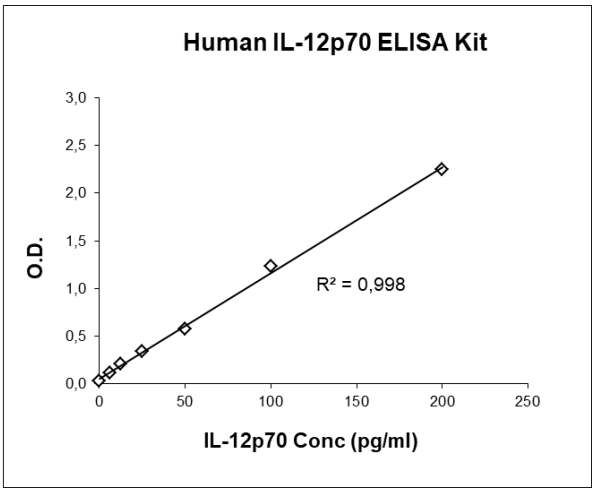
Calculate the average absorbance values for each set of duplicate standards, control and samples. Ideally duplicates should be within 20% of the mean.

Generate a linear standard curve by plotting the average absorbance of each standard on the vertical axis versus the corresponding IL-12p70 standard concentration on the horizontal axis.

The amount of IL-12p70 in each sample is determined by extrapolating OD values against IL-12p70 standard concentrations using the standard curve**.**

Example IL-12p70 Standard curve

Standard	IL-12p70 Conc (pg/ml)	OD (450nm) mean	CV (%)
1	200	2.244	5.46
2	100	1.231	0.04
3	50	0.572	2.89
4	25	0.342	1.04
5	12.5	0.202	7.5
6	6.25	0.110	9.09
zero	0	0.028	2.37



Note: curve shown above should not be used to determine results. Every laboratory must produce a standard curve for each set of microwell strips assayed.

11. Assay limitations

Do not extrapolate the standard curve beyond the maximum standard curve point. The dose-response is non-linear in this region and good accuracy is difficult to obtain. Concentrated samples above the maximum standard concentration must be diluted with Standard Diluent Buffer or with your own sample buffer to produce an OD value within the range of the standard curve. Following analysis of such samples always multiply results by the appropriate dilution factor to produce actual final concentration.

The influence of various drugs on end results has not been investigated. Bacterial or fungal contamination and laboratory cross-contamination may also cause irregular results.

Improper or insufficient washing at any stage of the procedure will result in either false positive or false negative results. Completely empty wells before dispensing fresh Wash Buffer, fill with Wash Buffer as indicated for each wash cycle and do not allow wells to sit uncovered or dry for extended periods.

Disposable pipette tips, flasks or glassware are preferred, reusable glassware must be washed and thoroughly rinsed of all detergents before use.

As with most biological assays conditions may vary from assay to assay therefore **a fresh standard curve must be prepared and run for every assay.**

12. Performance Characteristics

12.1. Sensitivity

The sensitivity or minimum detectable dose of IL-12p70 using this Human IL-12p70 ELISA kit was found to be **2.2 pg/ml**. This was determined by adding 3 standard deviations to the mean OD obtained when the zero standard was assayed 40 times.

12.2. Specificity

The assay recognizes both natural and recombinant human IL-12p70. To define the specificity of this ELISA several proteins were tested for cross reactivity. There was no cross reactivity observed for any protein tested: IL-1α, IL-1β, IL-2, IL-4, IL-6, IL-8, IL-10, IL-13, IL-23, IFNγ et TNFα.

12.3. Precision

Intra-assay
Reproducibility within the assay was evaluated in three independent experiments. Each assay was carried out with 6 replicates (3 duplicates) of samples containing different concentrations of IL-12p70: 2 in human pooled Serum and 3 in Standard diluent. Data below show the mean IL-12p70 concentration and the coefficient of variation for each sample.
The calculated overall coefficient of variation was 4.3%.

Session	***Sample***	**Mean** IL-12p70 pg/ml	**SD**	**CV%**
Session 1	***Sample 1***	298.00	15.13	**5.1**
	Sample 2	117.00	4.00	**3.4**
	Sample 3	69.67	2.08	**3.0**
	Sample 4	206.33	18.58	**9.0**
	Sample 5	111.67	3.21	**2.9**
Session 2	***Sample 1***	277.67	5.51	**2.0**
	Sample 2	123.00	12.49	**10.2**
	Sample 3	66.67	3.06	**4.6**
	Sample 4	192.33	10.02	**5.2**
	Sample 5	110.00	1.00	**0.9**
Session 3	***Sample 1***	278.67	5.51	**2.0**
	Sample 2	134.00	2.65	**2.0**
	Sample 3	65.33	1.53	**2.3**
	Sample 4	206.67	12.50	**6.0**
	Sample 5	102.33	5.69	**5.6**

Inter-assay
Assay to assay reproducibility within one laboratory was evaluated in three independent experiments. Each assay was carried out with 6 replicates (3 duplicates) of samples containing different concentrations of IL-12p70: 2 in human pooled Serum and 3 in Standard Diluent. Data below show the mean IL-12p70 concentration and the coefficient of variation for each sample.
The calculated overall coefficient of variation was 8.9%.

	Sample 1	***Sample 2***	***Sample 3***	***Sample 4***	***Sample 5***
Mean IL-12p70 pg/ml	280	120	64	197	102
SD	15	14	6	15	11
CV%	**5.5**	**11.3**	**9.4**	**7.8**	**10.4**

12.4. Dilution Parallelism

In two independent experiments two spiked human serum samples with different levels of IL-12p70 were analysed at different serial two fold dilutions (1:2 to 1:8) with two replicates each.
Recoveries ranged from 67 to 110% with an overall **mean recovery of 93%.**

12.5. Spike Recovery

The spike recovery was evaluated by spiking 2 concentrations of IL-12p70 in human serum and culture medium in 3 separate experiments.
Recoveries ranged from 86 to 94% with an overall **mean recovery of 91%.**

12.6. Stability

Storage Stability
Aliquots of spiked serum and spiked medium were stored at –20°C, +2-8°C, room temperature (RT) and at 37°C and the IL-12p70 level determined after 24h. There was a significant loss for each condition : at 2-8°C (18%), at room temperature (29%) and at 37°C (30%).

Freeze-thaw Stability
Aliquots of spiked serum and spiked medium were stored frozen at –20°C and thawed up to 5 times and the IL-12P70 level was determined. There was a slight loss of IL-12p70 reactivity after 3 and 5 cycles of freezing and thawing (14%).

12.7. Expected serum values

A panel of 24 human sera samples was tested for IL-12p70. All sera were below the detection level of IL-12p70 ELISA kit (2.2 pg/ml).

12.8. Standard Calibration

This immunoassay is calibrated against the International Reference Standard NIBSC 95/544. NIBSC 95/544 is quantitated in International Units (IU) and equivalence in ng/ml is indicated.
It has been calculated that 1 IU NIBSC (approximately 100 pg) correspond to 53 pg IL-12p70.

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15. Assay Summary

Total procedure length: 3h45min

Add 100µl of Samples, Control and diluted Standards and 50µl diluted Biotinylated Antibody

↓

Incubate 3 hours at room temperature

↓

Wash three times

↓

Add 100µl of diluted Streptavidin-HRP

↓

Incubate 30 min at room temperature

↓

Wash three times

↓

Add 100µl of TMB Substrate
Protect from light. Let the color develop for 10-15 min.

↓

Add 100µl of Stop Reagent

↓

Read Absorbance at 450 nm

Symbols / Symbole / Symboles / Símbolos / Simboli / Símbolos / Σύμβολα

REF	Cat.-No.: / Kat.-Nr.: / No.- Cat.: / Cat.-No.: / N.–Cat.: / N.º Cat.: / Αριθμός-Κατ.:
LOT	Lot-No.: / Chargen-Bez.: / No. Lot: / Lot-No.: / Lotto n.: / Lote N.º: / Αριθμός -Παραγωγή:
	Use by: / Verwendbar bis: / Utiliser à: / Usado por: / Da utilizzare entro:/ Usar até: / Χρησιμοποιείται από:
Σ	No. of Tests: / Kitgröße: / Nb. de Tests: / No. de Determ.: / Quantità dei tests: / N.º de Testes: / Αριθμός εξετάσεων:
CONC	Concentrate / Konzentrat / Concentré / Concentrar / Concentrato / Concentrado / Συμπύκνωμα
LYO	Lyophilized / Lyophilisat / Lyophilisé / Liofilizado / Liofilizzato / Liofilizado / Λυοφιλιασμένο
IVD	In Vitro Diagnostic Medical Device / In-vitro-Diagnostikum / Appareil Médical pour Diagnostics In Vitro / Dispositivo Médico para Diagnóstico In Vitro / Dispositivo Medico Diagnostico In vitro / Equipamento Médico de Diagnóstico In Vitro / Ιατρική συσκευή για In-Vitro Διάγνωση
BIO	Contains biological material of human origin / Enthält biologisches Material menschlichen Ursprungs / Contient une substance biologique d'origine humaine / Contiene material biológico de origen humano / Contiene materiale biologico di origine umana / Contém material biológico de origem humana / Περιέχει βιολογικό υλικό ανθρώπινης προέλευσης
BIO	Contains biological material of animal origin / Enthält biologisches Material tierischen Ursprungs / Contient une substance biologique d'origine animale / Contiene material biológico de origen animal / Contiene materiale biologico di origine animale / Contém material biológico de origem animal / Περιέχει βιολογικό υλικό ζωικής προέλευσης
UDI	Unique Device Identification / Eindeutige Gerätekennung / Identifiant de dispositif unique / Identificación única de producto / Identificatore univoco del dispositivo / Identificador de dispositivo único / Μοναδικός αναγνωριστικός κωδικός προϊόντος
	Read instructions before use / Arbeitsanleitung lesen / Lire la fiche technique avant emploi / Lea las instrucciones antes de usar / Leggere le istruzioni prima dell'uso / Ler as instruções antes de usar / Διαβάστε τις οδηγίες πριν την χρήση
	Keep away from heat or direct sun light / Vor Hitze und direkter Sonneneinstrahlung schützen / Garder à l'abri de la chaleur et de toute exposition lumineuse / Manténgase alejado del calor o la luz solar directa / Non esporre ai raggi solari / Manter longe do calor ou luz solar directa / Να φυλάσσεται μακριά από θερμότητα και άμεση επαφή με το φως του ηλίου
	Store at: / Lagern bei: / Stocker à: / Almacene a: / Armazenar a: / Conservare a: / Armazenar em: / Αποθήκευση στους:
2-8°C	Store at: 2 - 8°C / Lagern bei: 2 - 8°C / Stocker à: 2 - 8°C / Almacene a: 2 - 8°C / Armazenar a: 2 - 8°C / Conservare a: 2-8°C / Armazenar em: 2-8°C / Αποθήκευση στους: 2-8°C
	Manufacturer: / Hersteller: / Fabricant: / Productor: / Fabricante: / Fabbricante: / Παραγωγός:
	Distributor: / Distributor: / Distributeur: / Distributor: / Distributore: / Distribuidor: / Διανομέας:
	Caution! / Vorsicht! / Attention! / ¡Precaución! / Attenzione! / Cuidado! / Προσοχή!
	Symbols of the kit components see MATERIALS SUPPLIED. Die Symbole der Komponenten sind im Kapitel KOMPONENTEN DES KITS beschrieben. Voir MATERIEL FOURNI pour les symbôles des composants du kit. Símbolos de los componentes del juego de reactivos, vea MATERIALES SUMINISTRADOS. Per i simboli dei componenti del kit si veda COMPONENTI DEL KIT. Para símbolos dos componentes do kit ver MATERIAIS FORNECIDOS. Για τα σύμβολα των συστατικών του κιτ συμβουλευτείτε το ΠΑΡΕΧΟΜΕΝΑ ΥΛΙΚΑ.

Generic table, not all symbols are present in the product

COMPLAINTS: Complaints may be submitted initially written or vocal. Subsequently they need to be filed including the test performance and results in writing in case of analytical reasons.

WARRANTY: The product is warranted to be free from material defects within the specific shelf life and to comply with product specifications delivered with the product. The product must be used according to the Intended use, all instructions given in the instructions for use and within the product specific shelf life. Any modification of the test procedure or exchange or mixing of components of different lots could negatively affect the results. These cases invalidate any claim for replacement.

LIMITATION OF LIABILITY: IN ALL CIRCUMSTANCES THE EXTENT OF MANUFACTURER'S LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THE KIT(S) IN QUESTION. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS.

The labelling of hazardous substances is according to European directive.
For further country-specific classifications, please refer to the corresponding safety data sheet.

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