

小鼠胆固醇 7 α 羟化酶 (CYP7A1) 酶联免疫分析 (ELISA)

试剂盒使用说明书

本试剂仅供研究使用 目的：本试剂盒用于测定小鼠血清、血浆、组织匀浆及相关液体样本中胆固醇 7 α 羟化酶 (CYP7A1) 的含量。

实验原理：

本试剂盒应用双抗体夹心法测定标本中小鼠胆固醇 7 α 羟化酶 (CYP7A1) 水平。用纯化的小鼠胆固醇 7 α 羟化酶 (CYP7A1) 捕获抗体包被微孔板，制成固相抗体，往包被的微孔中依次加入小鼠胆固醇 7 α 羟化酶 (CYP7A1)，再与 HRP 标记的检测抗体结合，形成抗体-抗原-酶标抗体复合物，经过彻底洗涤后加底物 TMB 显色。TMB 在 HRP 酶的催化下转化成蓝色，并在酸的作用下转化成最终的黄色。颜色的深浅和样品中的小鼠胆固醇 7 α 羟化酶 (CYP7A1) 呈正相关。用酶标仪在 450nm 波长下测定吸光度 (OD 值)，通过标准曲线计算样品中小鼠胆固醇 7 α 羟化酶 (CYP7A1) 含量。

试剂盒组成：

| 试剂盒组成 | 48 孔配置 | 96 孔配置 | 保存 |
|-------------------|--------------------|--------------------|---------------------|
| 说明书 | 1 份 | 1 份 | |
| 封板膜 | 2 片 | 2 片 | |
| 密封袋 | 1 个 | 1 个 | |
| 酶标包被板 | 1 \times 48 | 1 \times 96 | 2-8 $^{\circ}$ C 保存 |
| 标准品 | 0.3ml \times 6 管 | 0.3ml \times 6 管 | 2-8 $^{\circ}$ C 保存 |
| 酶标试剂 | 5 ml \times 1 瓶 | 10 ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |
| 样品稀释液 | 3 ml \times 1 瓶 | 6 ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |
| 显色剂 A 液 | 3 ml \times 1 瓶 | 6 ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |
| 显色剂 B 液 | 3 ml \times 1 瓶 | 6 ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |
| 终止液 | 3 ml \times 1 瓶 | 6 ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |
| 20 \times 浓缩洗涤液 | 15ml \times 1 瓶 | 25ml \times 1 瓶 | 2-8 $^{\circ}$ C 保存 |

注：标准品浓度依次为：5000、2500、1250、625、312.5、0 pg/mL.

样本处理及要求：

1. 血清：室温血液自然凝固 10-20 分钟，离心 20 分钟左右 (2000-3000 转/分)。仔细收集上清，保存过程中如出现沉淀，应再次离心。
2. 血浆：应根据标本的要求选择 EDTA 或柠檬酸钠作为抗凝剂，混合 10-20 分钟后，离心 20 分钟左右 (2000-3000 转/分)。仔细收集上清，保存过程中如有沉淀形成，应该再次离心。
3. 尿液：用无菌管收集，离心 20 分钟左右 (2000-3000 转/分)。仔细收集上清，保存过程中如有沉淀形成，应再次离心。胸腹水、脑脊液参照实行。

订购热线：021-54461730、61725725 QQ：2881505697、2881505713

监督电话：13818158258

4. 细胞培养上清：检测分泌性的成份时，用无菌管收集。离心 20 分钟左右（2000-3000 转/分）。仔细收集上清。检测细胞内的成份时，用 PBS (PH7.2-7.4) 稀释细胞悬液，细胞浓度达到 100 万/ml 左右。通过反复冻融，以使细胞破坏并放出细胞内成份。离心 20 分钟左右（2000-3000 转/分）。仔细收集上清。保存过程中如有沉淀形成，应再次离心。
5. 组织标本：切割标本后，称取重量。加入一定量的 PBS, PH7.4。用液氮迅速冷冻保存备用。标本融化后仍然保持 2-8℃ 的温度。加入一定量的 PBS (PH7.4)，用手工或匀浆器将标本匀浆充分。离心 20 分钟左右（2000-3000 转/分）。仔细收集上清。分装后一份待检测，其余冷冻备用。
6. 标本采集后尽早进行提取，提取按相关文献进行，提取后应尽快进行实验。若不能马上进行试验，可将标本放于-20℃ 保存，但应避免反复冻融。
7. 不能检测含 NaN₃ 的样品，因 NaN₃ 抑制辣根过氧化物酶的（HRP）活性。

操作步骤

1. 标准品的加样：设置标准品孔和样本孔，标准品孔各加不同浓度的标准品 50 μL；。
2. 加样：分别设空白孔（空白对照孔不加样品及酶标试剂，其余各步操作相同）、待测样品孔。在酶标包被板上待测样品孔中先加样品稀释液 40 μL，然后再加待测样品 10 μL（样品最终稀释度为 5 倍）。加样将样品加于酶标板孔底部，尽量不触及孔壁，轻轻晃动混匀。
3. 加酶：每孔加入酶标试剂 100 μL，空白孔除外。
4. 温育：用封板膜封板后置 37℃ 温育 60 分钟。
5. 配液：将 20 倍浓缩洗涤液用蒸馏水 20 倍稀释后备用。
6. 洗涤：小心揭掉封板膜，弃去液体，甩干，每孔加满洗涤液，静置 30 秒后弃去，如此重复 5 次，拍干。
7. 显色：每孔先加入显色剂 A 50 μL，再加入显色剂 B 50 μL，轻轻震荡混匀，37℃ 避光显色 15 分钟。
8. 终止：每孔加终止液 50 μL，终止反应（此时蓝色立转黄色）。
9. 测定：以空白孔调零，450nm 波长依序测量各孔的吸光度（OD 值）。测定应在加终止液后 15 分钟以内进行。

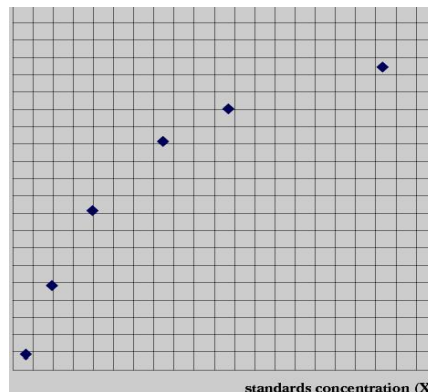
注意事项：

1. 试剂盒从冷藏环境中取出应在室温平衡 15-30 分钟后方可使用，酶标包被板开封后如未用完，板条应装入密封袋中保存。
2. 浓洗涤液可能会有结晶析出，稀释时可在水浴中加温助溶，洗涤时不影响结果。
3. 各步加样均应使用加样器，并经常校对其准确性，以避免试验误差。一次加样时间最好控制在 5 分钟内，如标本数量多，推荐使用排枪加样。
4. 请每次测定的同时做标准曲线，最好做复孔。如标本中待测物质含量过高（样本 OD 值大于标准品孔第一孔的 OD 值），请先用样品稀释液稀释一定倍数（n 倍）后再测定，计算时请最后乘以总稀释倍数（ $\times n \times 5$ ）。
5. 封板膜只限一次性使用，以避免交叉污染。
6. 底物请避光保存。
7. 严格按照说明书的操作进行，试验结果判定必须以酶标仪读数为准。
8. 所有样品，洗涤液和各种废弃物都应按传染物处理。
9. 本试剂不同批号组分不得混用。

10. 如与英文说明书有异，以英文说明书为准。

计算：

以标准物的浓度为横坐标，OD 值为纵坐标，在坐标纸上绘出标准曲线，根据样品的 OD 值由标准曲线查出相应的浓度；再乘以稀释倍数；或用标准物的浓度与 OD 值计算出标准曲线的直线回归方程式，将样品的 OD 值代入方程式，计算出样品浓度，再乘以稀释倍数，即为样品的实际浓度。



(此图仅供参考)

试剂盒性能：

1. 样品线性回归与预期浓度相关系数 R 值为 0.95 以上。
2. 批内变异系数与批间变异系数应分别小于 10%和 15% 。

检测范围：

156.25 pg/mL - 5000 pg/mL

灵敏度：

最低检测浓度小于 10 pg/mL

保存条件及有效期：

1. 试剂盒保存： 2-8℃。
2. 有效期： 6 个月

说明

- 1、由于现有条件及科学技术水平尚不能对所有供货商提供的所有原料进行全面的鉴定与分析，本产品可能存在一定的质量技术风险。
- 2、最终的实验结果与试剂的有效性、实验者的相关操作以及当时的实验环境密切相关，请务必准备充足的标本备份。
- 3、不同批次的同一产品可能会有少许差别，如：检测限、灵敏度以及显色时间等，请依据试剂盒内说明书进行实验操作，网站电子版说明书仅作参考。
- 4、只有全部使用本试剂盒配套试剂才能保证检测效果，不能混用其他制造商的产品。只有严格遵守本试剂盒的实验说明才会得到最佳的检测结果。
- 5、在储存及温育过程中避免将试剂暴露在强光中。所有试剂瓶盖须盖紧以防止蒸发和微生物的污染，因为蛋白水解酶的干扰将导致出现错误的结果。
- 6、刚开启的酶联板孔中可能会有少许水样物质，此为正常现象，不会对实验结果造成任何影响。请勿提前将酶标板从包装袋里拿出。
- 7、同一使用者在使用同一产品时，如不同时间订购，也可能会因不同批次的少量差异产生不同结果，因此建议使用者在每次使用前均进行预实验。
- 8、试剂盒在出厂前均经过严格检测，但由于运输条件及各实验室条件差异，可能会造成实验结果与出厂结果不一致或不同批次试剂盒批间差大的情况，对于这种情况会酌情处理。
- 9、本试剂盒未与其他厂家同类试剂盒或不同方法检测同一目的蛋白的产品做对比，平行检测可能会存在检测结果不一致的情况。
- 10、本操作说明同样适用于 48T 试剂盒，但 48T 试剂盒所有试剂减半。

Mouse cholesterol 7 α -hydroxylase

FOR RESEARCH USE ONLY

Drug Names

Generic Name : **Mouse cholesterol 7 α -hydroxylase (CYP7A1) ELISA Kit.**

Purpose

This kit allows for the determination of CYP7A1 concentrations in Mouse serum, plasma, tissue homogenates and other biological fluids.

Principle of the assay

The kit assay Mouse CYP7A1 level in the sample, use Purified Mouse CYP7A1 antibody to coat microtiter plate wells, make solid-phase antibody, then add CYP7A1 to the wells, Combined antibody which With HRP labeled, become antibody-antigen-enzyme-antibody complex, after washing Completely, Add TMB substrate solution, TMB substrate becomes blue color At HRP enzyme-catalyzed, reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm. The concentration of CYP7A1 in the samples is then determined by comparing the O.D. of the samples to the standard curve.

Materials provided with the kit

| Materials provided with the kit | 48determination s | 96 determinations | Storage |
|---------------------------------|----------------------|-------------------|---------|
| User manual | 1 | 1 | |
| Closure plate membrane | 2 | 2 | |
| Sealed bags | 1 | 1 | |
| Microelisa stripplate | 1 | 1 | 2-8℃ |
| Standard | 0.3ml×6 bottle | 0.3ml×6 bottle | 2-8℃ |
| HRP-Conjugate reagent | 5ml×1 bottle | 10ml×1 bottle | 2-8℃ |
| Sample diluent | 3ml×1 bottle | 6ml×1 bottle | 2-8℃ |
| Chromogen Solution A | 3ml×1 bottle | 6ml×1 bottle | 2-8℃ |
| Chromogen Solution B | 3ml×1 bottle | 6ml×1 bottle | 2-8℃ |
| Stop Solution | 3ml×1 bottle | 6ml×1 bottle | 2-8℃ |
| 20× Wash solution | 15ml×1 bottle | 25ml×1 bottle | 2-8℃ |

Note: Standard concentration was followed by:
5000、2500、1250、625、312.5、0 pg/mL.

Specimen requirements

1. **serum-** coagulation at room temperature 10-20 mins, centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant, If precipitation appeared, Centrifugal again.
2. **plasma-**use suited EDTA or citrate plasma as an anticoagulant,mix 10-20 mins ,centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant, If precipitation appeared, Centrifugal again.
3. **Urine-**collect sue a sterile container, centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant, If precipitation appeared, Centrifugal again. The Operation of Hydrothorax and cerebrospinal fluid Reference to it.
4. **cell culture supernatant-**detect secretory components, collect sue a sterile container, centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant,detect the composition of cells, Dilut cell suspension

with PBS (PH7.2-7.4) , Cell concentration reached 1 million / ml, repeated freeze-thaw cycles, damage cells and release of intracellular components, centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant, If precipitation appeared, Centrifugal again.

5. **Tissue samples**- After cutting samples, check the weight,add PBS (PH7.2-7.4) , Rapidly frozen with liquid nitrogen, maintain samples at 2-8℃ after melting,add PBS (PH7.4) , Homogenized by hand or Grinders, centrifugation 20-min at the speed of 2000-3000 r.p.m. remove supernatant.
6. extract as soon as possible after Specimen collection,and according to the relevant literature, and should be experiment as soon as possible after the extraction. If it can't, specimen can be kept in -20 ℃ to preserve, Avoid repeated freeze-thaw cycles.
7. Can't detect the sample which contain NaN₃, because NaN₃ inhibits HRP active.

Assay procedure

1. Add standard: Set Standard wells, testing sample wells. Add standard 50μl to standard well.
- 2.add sample: Set blank wells separately (blank comparison wells don't add sample and HRP-Conjugate reagent, other each step operation is same). testing sample well. add Sample dilution 40μl to testing sample well, then add testing sample 10μl (sample final dilution is 5-fold), add sample to wells , don't touch the well wall as far as possible, and Gently mix.
- 3.add enzyme: Add HRP-Conjugate reagent 100μl to each well, except blank well.
- 4.Incubate: After closing plate with Closure plate membrane ,incubate for 60 min at 37℃ .
- 5.Configurate liquid: 20-fold wash solution diluted 20-fold with distilled water

and reserve.

6.washing: Uncover Closure plate membrane, discard Liquid, dry by swing, add washing buffer to every well, still for 30s then drain, repeat 5 times, dry by pat.

7.color : Add Chromogen Solution A 50ul and Chromogen Solution B to each well, evade the light preservation for 15 min at 37°C

8.Stop the reaction : Add Stop Solution 50μl to each well, Stop the reaction(the blue color change to yellow color).

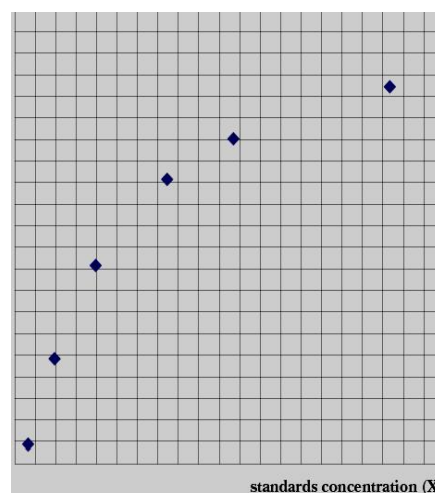
9.assay : take blank well as zero , Read absorbance at 450nm after Adding Stop Solution and within 15min.

Important notes

1. The kit takes out from the refrigeration environment should be balanced 15-30 minutes in the room temperature, ELISA plates coated if has not use up after opened, the plate should be stored in Sealed bag.
2. washing buffer will Crystallization separation, it can be heated the water helps dissolve when dilute . Washing does not affect the result.
3. add Sample with sampler Each step, And proofread its accuracy frequently, avoids the experimental error. add sample within 5 mins, if the number of sample is much , recommend to use Volley .
4. if the testing material content is excessively higher (The sample OD is bigger than the first standard well),please dilute Sample (n-fold), Please diluente and multiplied by the dilution factor. ($\times n \times 5$) .
5. Closure plate membrane only limits the disposable use, to avoid cross-contamination.
6. The substrate evade the light preservation.
7. Please according to use instruction strictly, The test result determination must take the microtiter plate reader as a standard.
8. All samples, washing buffer and each kind of reject should according to infective material process.
9. Do not mix reagents with those from other lots.

Calculate

Take the standard density as the horizontal, the OD value for the vertical, draw the standard curve on graph paper, Find out the corresponding density according to the sample OD value by the Sample curve, multiplied by the dilution multiple, or calculate the straight line regression equation of the standard curve with the standard density and the OD value, with the sample OD value in the equation, calculate the sample density,



This chart is for reference only

Assay range

156.25 pg/mL - 5000 pg/mL

Sensitivity

The minimum detectable dose is typically less than 10 pg/mL

Storage and validity

1. Storage : 2-8°C.
2. validity : six months.