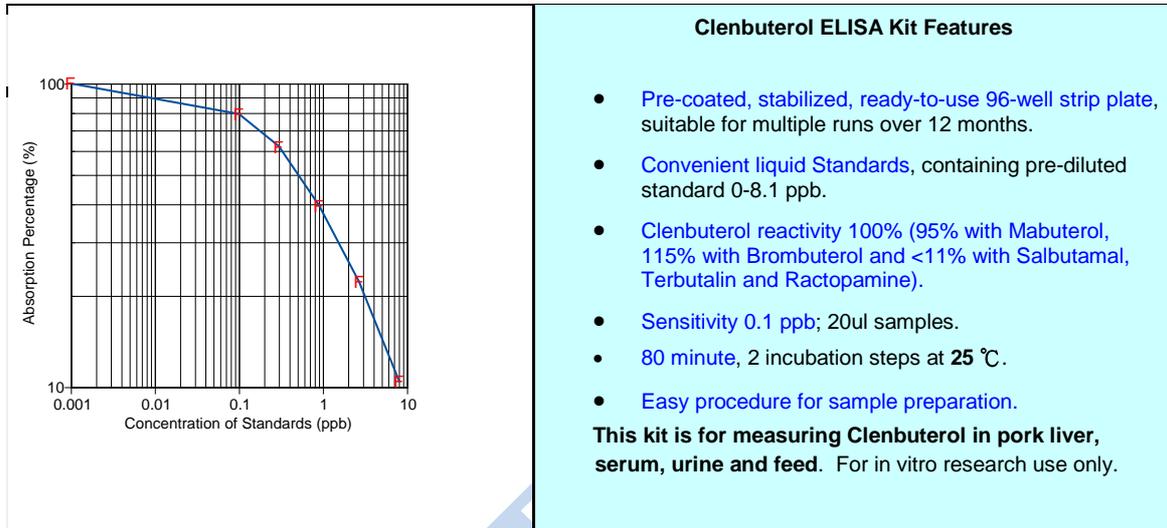


Clenbuterol ELISA Kit, Cat# DE-100010

Clenbuterol ELISA kit | Qualitative & Quantitative | **Stds = 0-8.1 ppb** | **Sample= 20 ul**; **80 min assay** | Sensitivity 0.1 ppb



Assay Procedure: Allow all reagents to reach room temperature. Arrange and label required number of strips.

- Step 1.** Pipet **20 ul of each standards** and samples containing Clenbuterol (diluted as required), **50 ul of enzyme conjugate** and **80 ul of antibody working** solution in duplicates into the wells. Seal the plate, mix gently and incubate at **25 °C for 30 min**.
- Step 2.** **Aspirate and wash** the plate five times.
- Step 3.** Add **50 ul of Substrate A** solution and then **50 ul of Substrate B** solution to all wells, mix gently, and incubate at **25 °C for 15 min in the dark** for coloration.
- Step 4.** Pipet **50 ul of stop solution** into each well and mix gently (blue color turns yellow). **Measure OD at A450 nm**. Calculate concentration of **Clenbuterol** in each sample using the Clenbuterol Standard curve.

General Information

Clenbuterol is a drug used by people who have breathing disorders. It is usually offered as Clenbuterol hydrochloride which is a salt form. It helps people with asthma to decongest and dilate the bronchi and bronchioles. Its chemical formula is C₁₂H₁₈Cl₂N₂O and its molecular weight is 277.19 g/mol. Clenbuterol is a Beta-2 agonist, which is a chemical with similar effects as epinephrine, a type of adrenaline, but it lasts for a longer time and is more powerful than other drugs. The main difference between clenbuterol and adrenaline is that clenbuterol stimulates only the target receptor Beta-2, on the other hand, adrenaline causes a variety of physiologic responses. Beta-2 agonist stimulates the closing of calcium channel helping adenylate cyclase. Adenylate cyclase is an enzyme that catalyzes the formation of adenosine triphosphate (ATP) to cyclic adenosine monophosphate (cAMP) and pyrophosphate. This is a very important passage since ATP is the main energy storage and transfer molecule in the cell. Clenbuterol promotes muscle growth, increases the aerobic ability, stimulates the central nervous system and increases blood pressure and oxygen transportation. It also increases the metabolism rate of fat and protein which at the same time slows the body's basal metabolic rate. In some countries clenbuterol is approved and used under prescription as a bronchodilator for people with asthma. It is an illegal drug in the United States, it is legalized to use in race horses under a threshold limit. It is also used as a bronchodilator in horses as a treatment for allergic reactions in the respiratory tract. It is commonly known as Ventipulmin. Clenbuterol is banned from use in animal's food production, since its residues can affect human. Clenbuterol is not a hormone but it is a drug that promotes growth. Its metabolite can affect lung and heart function if digested by human. However, it can easily be purchased over the internet as a dietary supplement. This drug is very common among bodybuilders who want to lower their body fat and have a slim look. Clenbuterol is rapidly absorbed and stays in the body for about 25-39 hours. In Spain, France, Italy, China, and Portugal had some cases involving

individuals who digested meat from animals treated with clenbutarol. The symptoms appeared after about 0.5-3 hours of digestion, they include increase in heart rate, nervousness, headache, muscular tremor, dizziness, nausea, vomiting, fever and chills. The symptoms went away after a treatment of 2 to 6 days. Alpha Diagnostic Intl's Clenbuterol ELISA kit is a highly sensitive competitive type assay for the measurement of Clenbuterol in pork liver, serum, urine and feed.

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