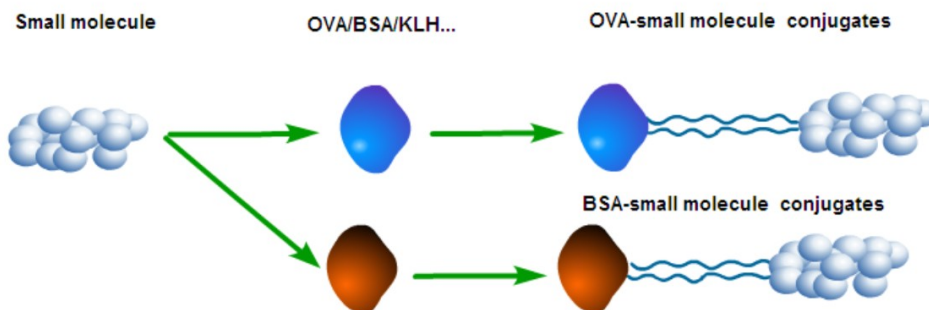


Competitive Inhibition ELISA Kit—— for Quantitative Detection of Small Molecules

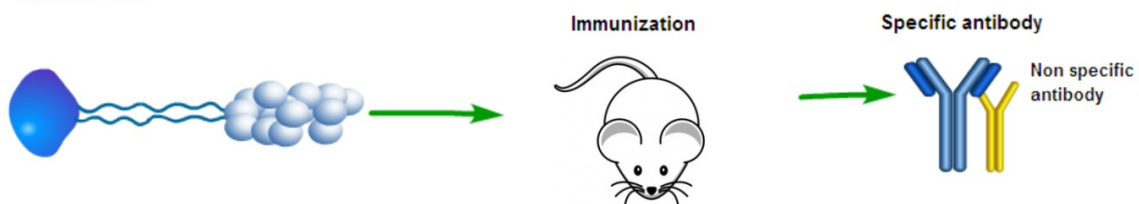
Small Molecules: Generally, small molecule refers to chemical compounds with low molecular weight (MW), regularly lower than 1000 Dalton (Da). Small molecules play important roles in various of scientific fields, for instance, hormones in clinical diagnosis, nucleotides in molecular biology, and so on.

As a kind of typical hapten, small molecules are lack of immunogenicity which can trigger immunized animal to produce specific antibody. Thus, it is difficult to quantify them by conventional immunodetection method. However, as the development of molecule-coupling technology, plus our own structural modifying tech for small molecules, we have got antibodies specific to small molecules (Fig. 1).

STEP 1:



STEP 2:



STEP 3:

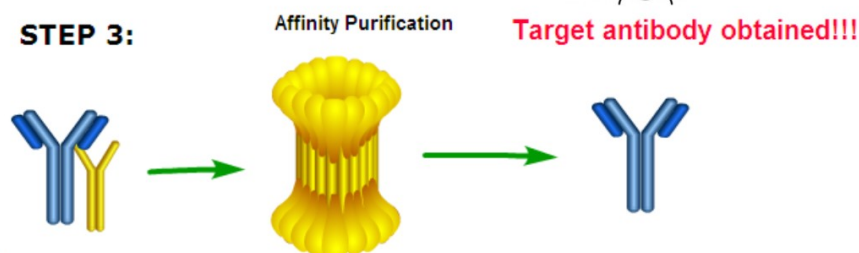


Figure 1. Preparation of small molecule specific antibody

Competitive Inhibition Method: Due to the unique chemical structural of small molecules, it generally has no more than one epitope, thereby double antibody sandwich method is not suitable for small molecule detection. So, we used the competitive inhibition method to establish small molecule-specific ELISA kits.

Comparing to conventional small molecule detection method—high performance liquid chromatography (HPLC), the advantages of ELISA for quantitative detection of small molecules are shown below:

Table 1. Comparison of ELISA and HPLC in small molecules detection

Items	HPLC	ELISA
Sample Volume	10-100 μ L	50 μ L
Sample Characteristic	High	Moderate
Experimental Time/Sample	20-45 min	< 2 min
Sample Quantity	1 sample/tube	90 samples/plate
Price of Equipment	High	Moderate
Test Charge/Sample	High	Moderate

General Kit: As small molecules show the same structure in all species, i.e., one kind of small molecule detection kit can recognize this molecule derived from different species. So, this kind of kits has also been called general kits.

Currently, small molecule detection kits we developed has captured the attention of researchers from different fields, including hormone in medical field, eg: estrone ([CEB003Ge](#)), testosterone ([CEA458Ge](#)), etc; amino acids and vitamins in biological field, eg: arginine ([CEB938Ge](#)), vitamine B1 ([CED053Ge](#)), etc.; lipopolysaccharide ([CEB526Ge](#)) in microbiology, abscisic acid ([CEB218Ge](#)) in plants and so on.

For more information, please visit <http://www.cloud-clone.us/>.