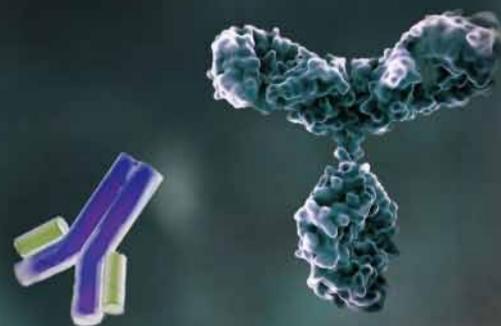


CD Creative Diagnostics®

SMALL MOLECULES

Antigen/Antibody



Small Molecules Antigen/Antibody



Haptens, also known as incomplete antigens, are small molecules that can bind to the antibody, but will usually not initiate an immune response alone. It only has immunoreactivity, no immunogenicity.

However, it can elicit an immune response and produce the antibody when attached to a large carrier such as a protein.

Most polysaccharides and all lipids are haptens. Some small substances (such as vitamins, antibiotics, drugs, etc.) with specific structure called simple hapten.

When simple hapten gets into the body of allergies, it can combine with the tissue protein and become complete antigen which can cause hypersensitivity.

In general, B lymphocytes recognize hapten epitopes and T lymphocytes recognize carrier epitopes.

Small Molecules

+ Vitamins

Vitamin A
Vitamin B1, B2, B3, B7
Vitamin B7/Biotin
Vitamin B9/Folic Acid
Vitamin B12
Vitamin C
25-OH Vitamin D
1,25 (OH)₂ Vitamin D3
Vitamin E
Vitamin K1

+ Drugs of Abuse

Acetamiprid
Acetochlor
Carbaryl
Carbendazim
Chlorothalonil
Chlorpyrifos
Clonazepam
Diazepam
Dihydrochlorothiazide
Fenpropathrin
Imidacloprid
Nitrazepam
Parathion methyl

+ Hormones

19-Norandrosterone
Bisphenol a
Estradiol
Hydrocortisone
Methyltestosterone
Nonylphenol
Tetrabromobisphenol A
Polybrominated diphenyl ether
Ractopamine
Testosterone

+ Therapeutic Drugs

Carbamazepine
Digoxin
L-Norephedrine
Phenytoin
Theophylline
Valproic Acid

+ Mycotoxins

Aflatoxin B1
Aflatoxin M1
Aflatoxin
Ochratoxin
Zearalenone
Fumonisin
T-2 toxin

+ Antibiotics

Sulfadiazine
Sulfaquinoxaline
Sulfamethazine
Sulfadimethoxine
Trimethoprim
Chloramphenicol
Kanamycin
Streptomycin
Neomycin
Erythrocin
Spectinomycin
Fluoroquinolones
Avermectin
Tylosin
Tilmicosin
Vancomycin
Salinomycin
Monensin
Tetracycline
Olaquinox
Sarafloxacin
Ofloxacin
Enrofloxacin