# Anti-Sulfadimidine Antibody [HuaM009-51B]

## HA721132

| | |
|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Applications:** | ELISA |
| **Clone number:** | HuaM009-51B |

**Description:** Sulfamethazine is a sulfonamide consisting of pyrimidine with methyl substituents at the 4- and 6-positions and a 4-aminobenzenesulfonamido group at the 2-position. It has a role as an antiinfective agent, a carcinogenic agent, a ligand, an antibacterial drug, an antimicrobial agent, an EC 2.5.1.15 (dihydropteroate synthase) inhibitor, an environmental contaminant, a xenobiotic and a drug allergen. It is a member of pyrimidines, a sulfonamide and a sulfonamide antibiotic. It derives from a sulfanilamide. Sulfamethazine is a sulfonamide drug that inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid (PABA) for binding to dihydropteroate synthetase (dihydrofolate synthetase). Sulfamethazine is bacteriostatic in nature. Inhibition of dihydrofolic acid synthesis decreases the synthesis of bacterial nucleotides and DNA. Sulfamethazine may cause nausea, vomiting, diarrhea and hypersensitivity reactions. Hematologic effects such as anemia, agranulocytosis, thrombocytopenia and hemolytic anemia in patients with glucose-6-phosphate dehydrogenase deficiency may also occur. Sulfamethoxazole may displace bilirubin from albumin binding sites causing jaundice or kernicterus in newborns. Sulfamethazine produces thyroid tumors in mice and rats by a non-genotoxic mechanism, which involves inhibition of thyroid peroxidase resulting in alterations in thyroid hormone concn and incr secretion of thyroid stimulating hormone. Consequently, sulfamethazine would be expected not to be carcinogenic to humans exposed to doses that do not alter thyroid hormone homeostasis. Evidence from epidemiological studies and from toxicological studies in experimental animals provide compelling evidence that rodents are substantially more sensitive than humans to the development of thyroid tumors in response to thyroid hormone imbalance. This antibody does not cross-react with Sulfamethoxypyridazine and sulfamethoxazole.

| | |
|---|---|
| **Immunogen:** | Sulfadimidine |
| **Positive control:** | Sulfadimidine-BSA |
| **Recommended Dilutions:** | |
| **ELISA** | 1:10,000 |
| **Storage Buffer:** | PBS (pH7.4). |
| **Storage Instruction:** | Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles. |
| **Purity:** | Protein A affinity purified. |

## Images

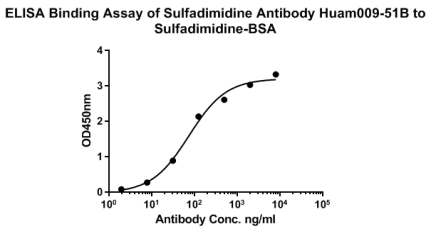


**Fig1:** Indirect ELISA analysis of Sulfadimidine was performed by coating wells of a 96-well plate with 50 µl per well of Sulfadimidine-BSA diluted in carbonate/bicarbonate buffer, at a concentration of 1 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 1%BSA blocking buffer, and incubated with 100 µl per well of Sulfadimidine monoclonal antibody starting at a concentration of 20 µg/mL and serially diluting it to a concentration of 1.28 ng/mL for 1 hours at room temperature. The plate was washed and incubated with 50 µl per well of an HRP-conjugated goat anti-Rabbit IgG secondary antibody at a dilution of 1:15,000 for one hour at room temperature. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

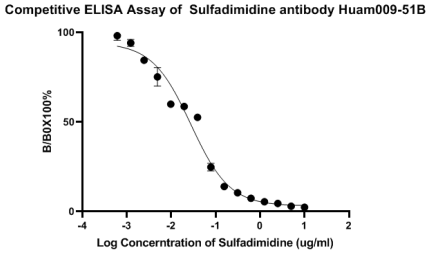


**Fig2:** Competitive ELISA analysis of Sulfadimidine was performed by coating wells of a 96-well plate with 50 µl per well of Sulfadimidine-BSA diluted in carbonate/bicarbonate buffer, at a concentration of 0.1 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 1%BSA blocking buffer, and incubated with 100 µl per well of Sulfadimidine monoclonal antibody at concentration of 0.5 µg/mL with serial diluted Sulfadimidine molecule starting from a concentration of 10ug/ml for 1 hours at room temperature. The plate was washed and incubated with 50 µl per well of an HRP-conjugated goat anti-Rabbit IgG secondary antibody at a dilution of 1:15,000 for one hour at room temperature. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.