

ARG83392 Thiamine / Vitamin B1 Assay Kit

Package: 96 wells

Store at: 4°C

Summary

Product Description	ARG83392 Thiamine / Vitamin B1 Assay Kit can be used to measure Thiamine / Vitamin B1 in Urine, tissue extracts, cell lysate and other biological fluids.
Tested Reactivity	Other
Tested Application	FuncSt
Target Name	Thiamine / Vitamin B1
Conjugation Note	Read at 704 nm
Sensitivity	1 µmol/L
Sample Type	Urine, tissue extracts, cell lysate and other biological fluids.
Standard Range	2 µmol/l - 200 µmol/l
Sample Volume	50 µl
Alternate Names	thiamine; thiamin; vitamin B1; Aneurin; Antiberiberi factor; Thiamine ion; thiaminium; Betaxin

Application Instructions

Assay Time	30 min
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Properties

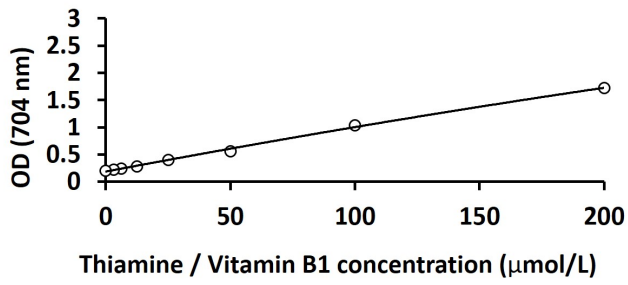
Form	96 well
Storage instruction	Store the kit at 4°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Background	Thiamine or thiamin, also known as vitamin B1, is a colorless compound with the chemical formula C ₁₂ H ₁₇ N ₄ O ₅ . It is soluble in water and insoluble in alcohol. Thiamine decomposes if heated. Thiamine was first discovered by Umetaro Suzuki in Japan when researching how rice bran cured patients of Beriberi. Thiamine plays a key role in intracellular glucose metabolism and it is thought that thiamine inhibits the effect of glucose and insulin on arterial smooth muscle cell proliferation. Thiamine plays an important role in helping the body convert carbohydrates and fat into energy. It is essential for normal growth and development and helps to maintain proper functioning of the heart and the nervous and digestive systems. Thiamine cannot be stored in the body; however, once absorbed, the vitamin is concentrated in muscle tissue.
Function	Thiamine is important not only for mitochondrial membrane development, but also for synaptic membrane function. It has also been suggested that a deficiency hinders brain development in infants and may be a cause of sudden infant death syndrome.
Highlight	Well-known disorders caused by thiamine deficiency include beriberi, Wernicke–Korsakoff syndrome,

optic neuropathy, Leigh's disease, African seasonal ataxia (or Nigerian seasonal ataxia), and central pontine myelinolysis. Symptoms include malaise, weight loss, irritability and confusion.

Images



ARG83392 Thiamine / Vitamin B1 Assay Kit standard curve image

ARG83392 Thiamine / Vitamin B1 Assay Kit results of a typical standard run with optical density reading at 704 nm.