

Threonine Assay Kit ab239726

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Overview

Product name Threonine Assay Kit

Detection method Fluorescent

Product overview The Threonine Assay Kit (ab239726) allows for highly sensitive quantification of L-Threonine levels in biological fluids and tissues. The assay is based on the selective, NAD⁺-coupled enzymatic metabolism of threonine, yielding an oxidized intermediate and NADH. A developer enzyme mixture utilizes the NADH generated to convert the probe into a stable fluorophore (Ex/Em = 535/587 nm). The assay is not affected by physiological concentrations of other amino acids, is high-throughput adaptable and can detect threonine levels down to 2 µM in samples.

Sample Type:

Human or animal biological fluids (plasma, serum, CSF, etc.)

Soft tissue homogenates (i.e. liver, brain, etc.)

Cultured cell lysates (adherent or suspension cells) or cell culture growth medium

Notes This product is manufactured by BioVision, an Abcam company and was previously called K463 PicoProbe™ Threonine Assay Kit (Fluorometric). K463-100 is the same size as the 100 test size of ab239726.

Platform Microplate reader

Properties

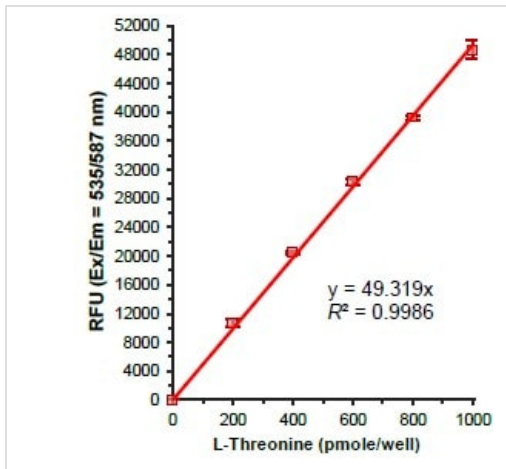
Storage instructions Store at -20°C. Please refer to protocols.

Components	100 tests
Developer Solution X	1 vial
L-Threonine Standard	1 vial

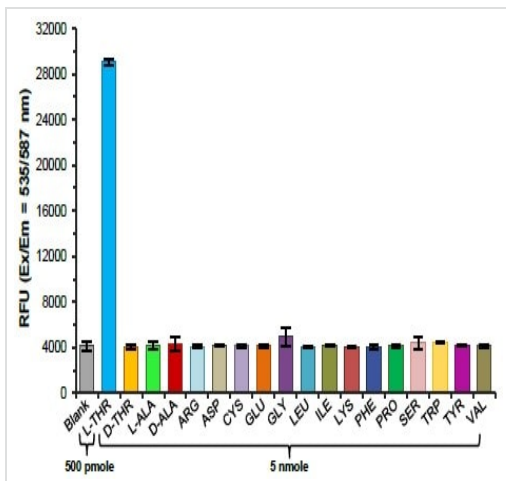
Components	100 tests
PicoProbe II	1 x 200µl
Threonine Assay Buffer	1 x 25ml
Threonine Enzyme Mix	1 vial

Relevance Threonine is one of the 20 natural amino acids. Nutritionally, in humans, threonine is an essential amino acid.

Images

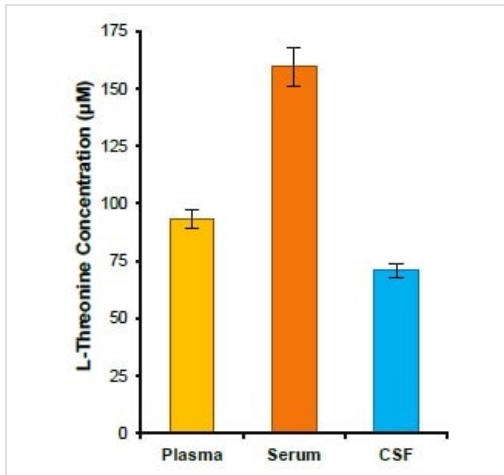


Threonine Standard Curve.



Specificity for detection of L-Threonine (L-THR) over D-Threonine and other common amino acids.

At a 10-fold molar excess (5 nmole/well) versus L-Threonine (500 pmole/well), all other amino acids tested contribute ≤5% interference.



L-Threonine concentrations for plasma, serum and CSF samples were $93.26 \pm 3.72 \mu\text{M}$, $159.7 \pm 8.36 \mu\text{M}$ and $70.92 \pm 3.12 \mu\text{M}$, respectively. Data are mean \pm SEM of at least 3 replicates, samples were deproteinized using 10 kDa MWCO spin columns and assayed according to the kit protocol.

Estimation of total L-Threonine in pooled normal human plasma (10 μl), single donor off-the-clot human serum (5 μl) and pooled human CSF (10 μl).

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