abcam

Product datasheet

Glutamate Assay Kit (Fluorometric) ab138883

14 References 画像数 5

製品の概要

製品名	Glutamate Assay Kit (Fluorometric)
検出方法	Fluorescent
サンプルの種類	Urine, Serum, Plasma, Other biological fluids, Tissue, Cell Lysate
アッセイタイプ	Quantitative
検出感度	1 µM
全工程の試験時間	0h 30m
製品の概要	Glutamate Assay Kit (Fluorometric) (ab138883) provides a quick and sensitive method for the measurement of glutamate (glutamic acid) in various biological samples. In the glutamate assay protocol, the coupled enzyme system catalyzes the reaction between L-Glutamic acid and $NADP^+$ to produce NADPH, which is specifically recognized by the NADPH sensor and recycled back to $NADP^+$. During the reaction, a red fluorescence product is produced, which in turn can be detected in a fluorescence microplate reader at Ex/Em = 540/590 nm (range Ex/Em = 530 – 570/590 – 600 nm). This assay can detect as little as 1 µM glutamic acid. The signal can also be read by absorbance at OD: 576 ± 5 nm, although the sensitivity of the assay is reduced 10-fold. The assay is robust, and can be easily adapted to automation without separation step as no wash step is required. Glutamate assay protocol summary: - add samples and standards to wells - add reaction mix and incubate for 30 min - 2 hr - analyze with a microplate reader
試験プラットフォーム	Microplate reader

製品の特性

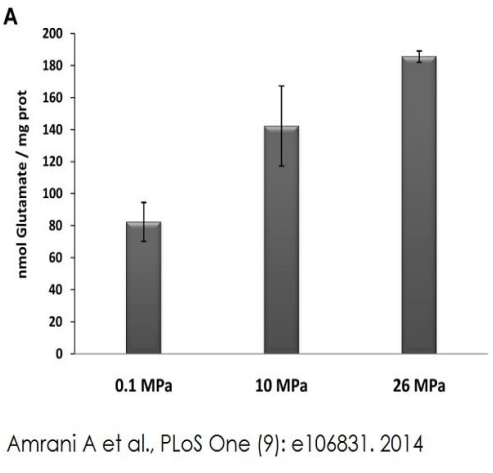
保存方法	Store at -20°C. Please refer to protocols.

内容	200 tests
Assay Buffer	1 x 10ml
Dilution Buffer	1 x 10ml
Enzyme Mix	1 unit
Glutamic Acid	1 vial
NADP	1 vial

関連性

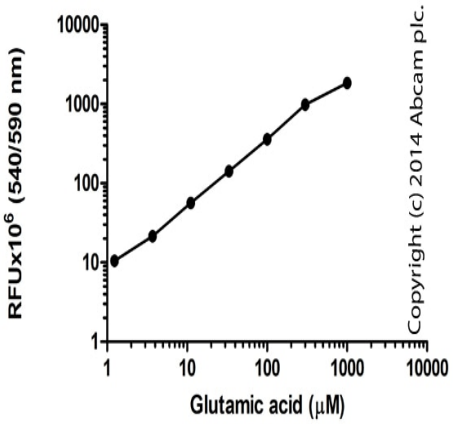
Glutamate, one of the two acidic proteinogenic amino acids, is also a key molecule in cellular metabolism. In humans, glutamate plays an important role both in amino acid degradation and disposal of excess or waste nitrogen. Glutamate is the most abundant swift excitatory neurotransmitter in the mammalian nervous system. It is believed to be involved in learning and memory and has appeared to be involved in diseases like amyotrophic lateral sclerosis, lathyrism, autism, some forms of mental retardation and Alzheimer's disease. Glutamic acid is also present in a wide variety of foods, and has been used as a flavor enhancer in food industry.

画像



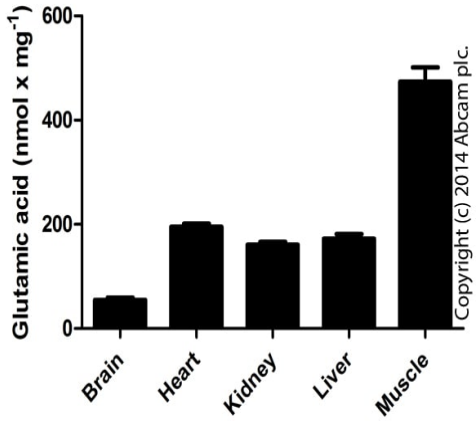
The concentration of intracellular glutamate in cells, during the exponential phase, grown at different hydrostatic pressures.

Intracellular glutamate was measured using ab138883



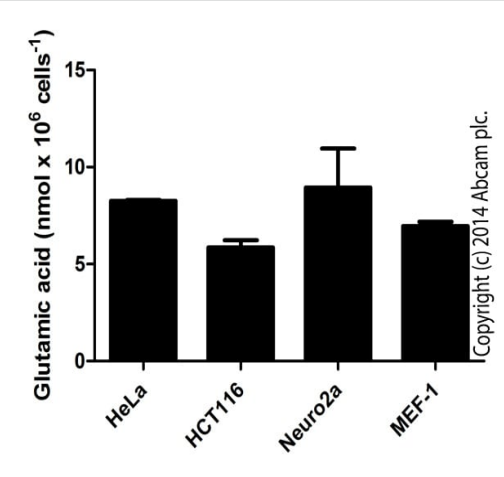
Functional Assay: Glutamate Assay Kit (fluorometric) (ab138883)

Standard curve (30 minutes incubation): mean of duplicates (+/- SD), with background reads subtracted.



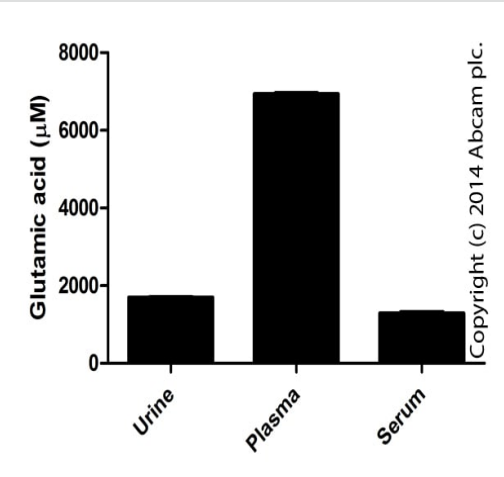
Functional Assay: Glutamate Assay Kit (fluorometric) (ab138883)

Glutamic acid measured in mouse tissue lysates, showing quantity (nmol) per mg of extracted protein (mean of duplicates, +/- SD).



Functional Assay: Glutamate Assay Kit (fluorometric) (ab138883)

Glutamic acid measured in cell lysates showing quantity (nmol) per 10^6 cells (mean of duplicates, +/- SD).



Functional Assay: Glutamate Assay Kit (fluorometric) (ab138883)

Glutamate measured in human biological fluids (mean of duplicates, +/- SD).

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