

Glutathione Reductase (GR) Assay Kit ab83461

[29 References](#) [画像数 6](#)

製品の概要

製品名	Glutathione Reductase (GR) Assay Kit
検出方法	Colorimetric
サンプルの種類	Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate
アッセイタイプ	Enzyme activity
検出感度	> 0.1 mU/ml
検出範囲	0.1 mU/ml - 40 mU/ml
全工程の試験時間	0h 40m
製品の概要	Glutathione Reductase Assay Kit (ab83461) is a highly sensitive, simple, direct and HTS-ready colorimetric assay for measuring GR activity in biological samples. In the assay, GR reduces GSSG to GSH, which reacts with 5, 5'-Dithiobis (2-nitrobenzoic acid) (DTNB) to generate TNB2- (yellow color, $\lambda_{max} = 405$ nm). The assay can detect 0.1-40 mU/ml GR in various samples.

Since Glutathione Reductase has significantly higher concentrations in cells (mM range) compared to Thioredoxin Reductase (μ M range), we predict that ab83461 will detect mostly GR activity in samples.

特記事項 This product is manufactured by BioVision, an Abcam company and was previously called K761 Glutathione Reductase Activity Colorimetric Assay Kit. K761-200 is the same size as the 200 test size of ab83461.

Glutathione Reductase (GR, EC 1.8.1.7) catalyzes the NADPH-dependent reduction of oxidized glutathione (GSSG) to reduced glutathione (GSH), which plays an important role in the GSH redox cycle that maintains adequate levels of reduced GSH. A high GSH/GSSG ratio is essential for protection against oxidative stress.

Related products

Review the [oxidative stress marker and assay guide](#) to learn about more assays for oxidative stress.

試験プラットフォーム Microplate reader

製品の特性

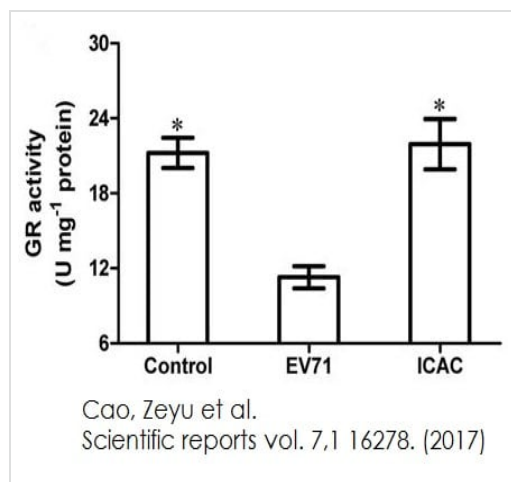
保存方法 Store at -20°C. Please refer to protocols.

内容	200 tests
Assay Buffer XLI	1 x 100ml
Catalase	1 x 1ng
DTNB	1 vial
GR Positive Control	1 vial
GSSG	1 vial
NADPH Generating Mix	2 vials
Substrate V	1 x 1ml
TNB Standard	1 x 1ng

関連性 Glutathione Reductase (GR, EC 1.8.1.7) catalyzes the NADPH-dependent reduction of oxidized glutathione (GSSG) to reduced glutathione (GSH), which plays an important role in the GSH redox cycle that maintains adequate levels of reduced GSH. A high GSH/GSSG ratio is essential for protection against oxidative stress.

細胞内局在 Cytoplasmic and Mitochondrial

画像

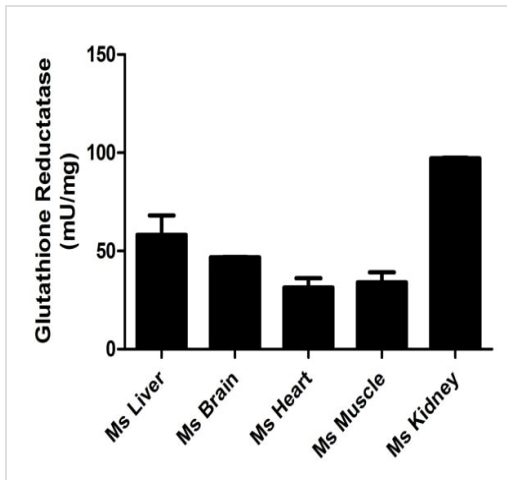


ICAC decreased the ROS level induced by EV71 infection via modulating the antioxidant enzymes involved in GSH metabolism. Infected (100 TCID₅₀ EV71) Vero cells were treated with medium or 100 μM ICAC for 12 h. Uninfected cells were used as the control group. The antioxidant enzymes activities of the Vero cells were detected (n = 3). All results were expressed as the means ± SEs. Asterisks indicate that the data significantly differ from the EV71 group at the P < 0.05 level according to one-way analysis of variance.

Functional Studies - Glutathione Reductase (GR)

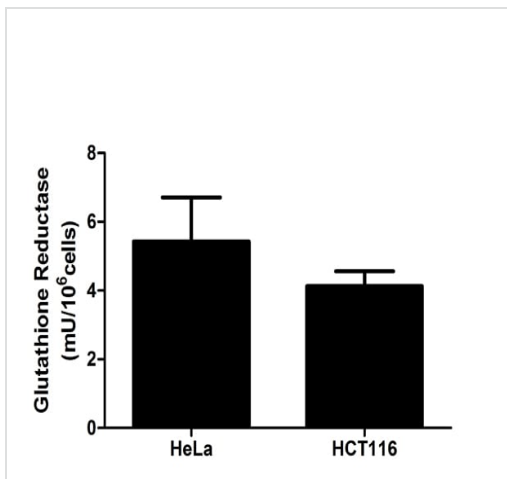
Assay Kit (ab83461)

Cao, Zeyu et al., Scientific reports?vol. 7,1 16278., Fig 5, doi:10.1038/s41598-017-16446-7



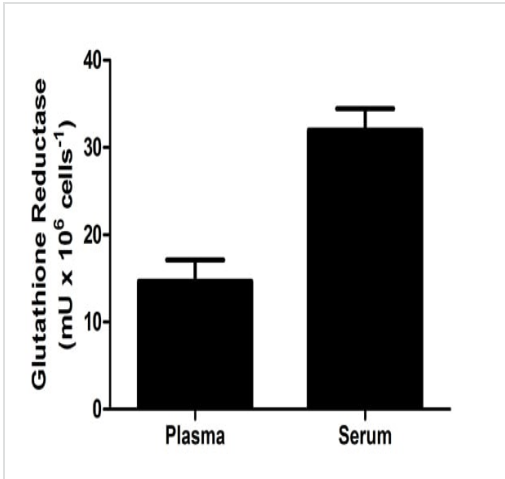
Glutathione reductase measured in mouse tissue lysates showing activity (mU) per mg of extracted protein ($T_1=2$ min; $T_2=30$ min).

Functional Studies - Glutathione Reductase Assay
Kit (ab83461)



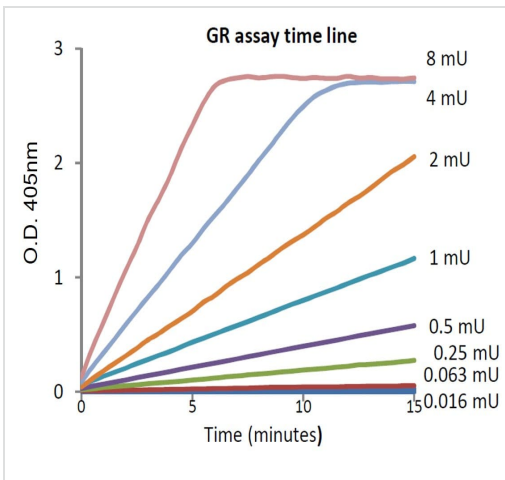
Glutathione reductase measured in cell lysates (mU) per 10^6 cells ($T_1=2$ min; $T_2=30$ min)

Functional Studies - Glutathione Reductase Assay
Kit (ab83461)



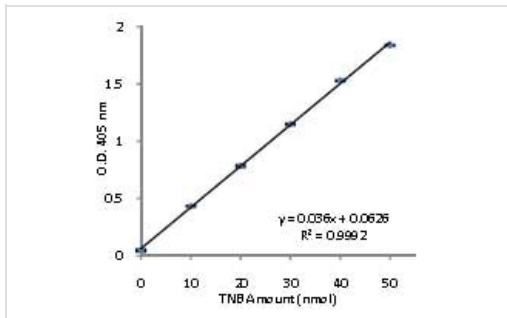
Glutathione reductase measured in human plasma and serum ($T_1=2$ min; $T_2=30$ min) showing activity (mU) per ml of tested sample. No activity was detected in saliva or urine.

Functional Studies - Glutathione Reductase Assay
Kit (ab83461)



Glutathione Reductase assay time line using ab83461.

Functional Studies - Glutathione Reductase Assay
Kit (ab83461)



TNB Standard Curve using ab83461.

Functional Studies - Glutathione Reductase Assay
Kit (ab83461)

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