

Product datasheet

Free Thiol Assay Kit (Fluorometric) ab112158

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Overview

Product name	Free Thiol Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Urine, Plasma, Cell culture extracts
Assay type	Quantitative
Assay time	0h 20m
Product overview	This product is not suitable for protein samples.

Free Thiol Assay Kit (Fluorometric) (ab112158) provides an ultrasensitive fluorometric assay to quantitate thiol content that exists in small molecules such as free cysteine, glutathione, and cysteine residues. The assay is based on a proprietary non-fluorescent dye tha generates a strongly fluorescent adduct upon reacting with a thiol compound. The signal produced by the adduct can ebe asily read by a fluorescence microplate reader at Ex/Em = 490/520 nm. In addition, both absorption and emission spectra of the thiol adduct are pH-independent, making the assay highly robust. There are few reagents or assay kits available for quantitating thiol content in biological systems, and the majority of commercial kits either lack sensitivity or have tedious protocols. The assay can detect as little as 1 picomole of cysteine or GSH in a 100 µL assay volume (10 nM).

Please note it is not possible to do a quantification in comparison to the standard.

Free Thiol assay protocol summary:

- add samples and standards to wells
- add reaction mix
- analyze with microplate reader for 10 min to 1 hr

Notes This product was previously called Thiol Quantification Assay Kit (Fluorometric).

This product detects thiol groups on small molecules. If you want to detect thiol groups in proteins, we recommend **Total Protein Thiol Quantification Assay Kit (Colorimetric) (ab219272)**.

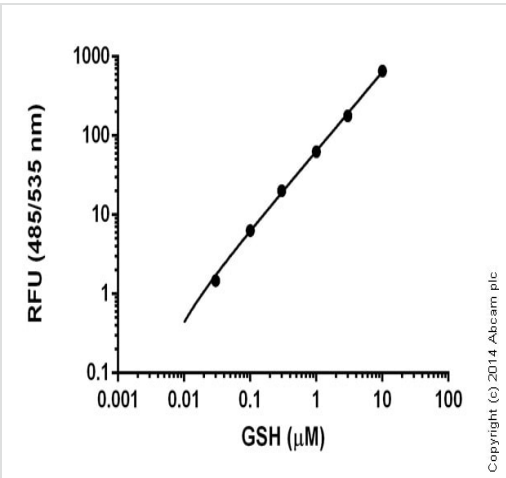
Platform Microplate reader

Properties

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

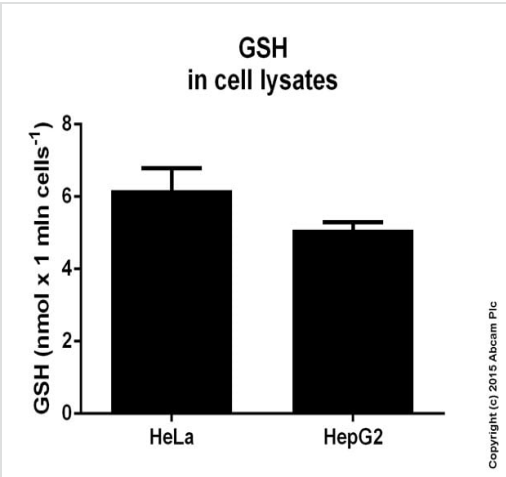
Components	200 tests
Assay Buffer	1 x 25ml
DMSO	1 x 200µl
GSH Standard	1 x 62µg
Thiol Green Indicator	1 vial

Images



Standard curve: mean of duplicates (+/- SD) with background reads subtracted

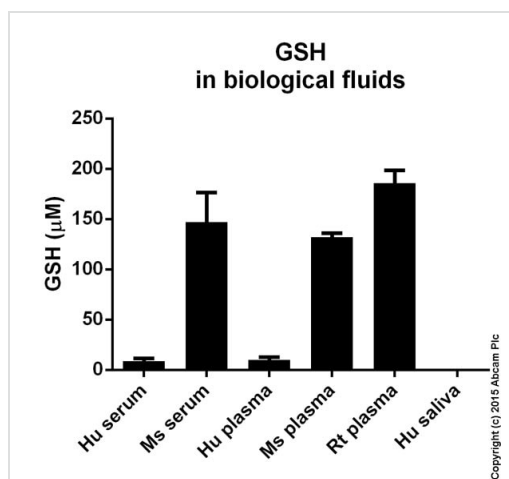
Functional Studies - Thiol Quantification Assay kit (Fluorometric) (ab112158)



GSH measured in cell lysates showing quantity (nmol) per 1 mln cells.

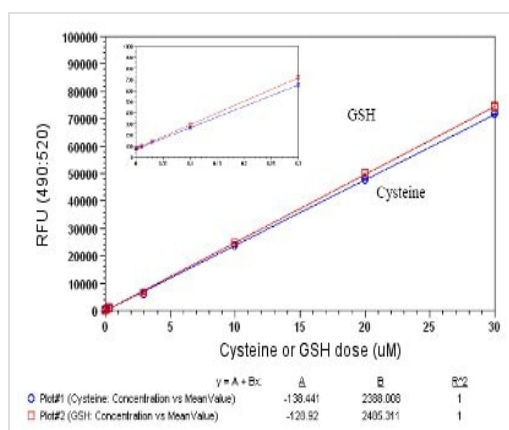
Samples with the concentration of 1e8 cells/mL were used. Samples were diluted 100-1000 fold.

Functional Studies - Thiol Quantification Assay kit (Fluorometric) (ab112158)



GSH measured in biological fluids. Samples were diluted 10-1000 fold.

Functional Studies - Thiol Quantification Assay kit
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GSH and Cysteine dose responses were measured in a 96-well black plate with ab112158 using a microplate reader. As low as 10 nM (1 pmol/well) of GSH or Cysteine can be detected with 10 minutes incubation time (n=3). The insert shows the low levels of thiol detection.

Functional Studies - Thiol Quantification Assay Kit
(Fluorometric) (ab112158)

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