NKMAXBiO we support you, we believe in your research Human Glutathione Reductase/GSR antibody Catalog Number: ATGA0323

# **PRODUCT INFORMATION**

Catalog number ATGA0323

Clone No. AT11D10

**Product type** Monoclonal Antibody

**UnitProt No.** P00390

NCBI Accession No. NP\_000628

Alternative Names Glutathione reductase, GLuR, GRD1

# **PRODUCT SPECIFICATION**

Antibody Host Mouse

Reacts With Human

Concentration 1mg/ml (determined by BCA assay)

# Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

### Immunogen

Recombinant human GSR (43-522aa) purified from E.coli

# lsotype

lgG1 kappa

**Purification Note** By protein-A affinity chromatography

## Application

ELISA, WB, ICC/IF, FACS

## Usage

The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.



#### Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

#### Description

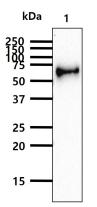
Glutathione reductase (GR) also known as glutathione-disulfide reductase (GSR) is an enzyme that in humans is encoded by the GSR gene. Glutathione reductase catalyzes the reduction of glutathione disulfide (GSSG) to the sulfhydryl form glutathione (GSH), which is a critical molecule in resisting oxidative stress and maintaining the reducing environment of the cell. Glutathione reductase functions as dimeric disulfide oxidoreductase and utilizes an FAD prosthetic group and NADPH to reduce one mole of GSSG to two moles of GSH.

#### **General References**

Deponte M. (2013) Biochim Biophys Acta 1830(5): 3217-3266 Meister A. (1988) J Biol Chem 263(33): 17205-17208 Mannervik B. (1987) Biochem Soc Trans 15(4): 717-718

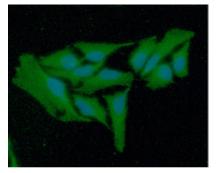
### DATA

### Western blot analysis (WB)



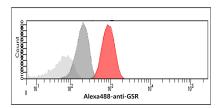
The recombinant protein (50ng) was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human GSR antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system. Lane 1.: Recombinant human GSR protein

### Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of GSR in HeLa cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human GSR antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).

Flow cytometry (FACS)



Flow cytometry analysis of GSR in Jurkat cells. The cell was stained with ATGA0323 at 2-5ug for 1x10<sup>6</sup>Cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).