abcam

Product datasheet

Anti-Glutathione antibody [D8] ab19534

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Overview

Product name	Anti-Glutathione antibody [D8]
Description	Mouse monoclonal [D8] to Glutathione
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Species independent
Immunogen	Glutathione conjugated to KLH
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituent: PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	D8
Isotype	IgG2a

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab19534 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

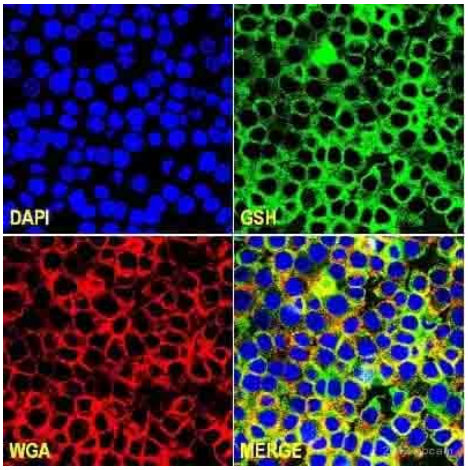
Application	Abreviews	Notes
Flow Cyt	(1)	Use at an assay dependent concentration. **ab170191** - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
ICC/IF	(4)	Use a concentration of 10 µg/ml.

Target

Relevance

Glutathione is a small peptide composed of three amino acids: cysteine, glutamic acid, and glycine and is present in tissues in concentrations as high as one millimolar. It contains an unusual peptide linkage between the amine group of cysteine and the carboxyl group of the glutamate side chain. Glutathione is involved in detoxification, it binds to toxins, such as heavy metals, solvents, and pesticides, and transforms them into a form that can be excreted in urine or bile. It is also an important antioxidant, helping to maintain the -SH groups of proteins in their reduced form. Chronic functional glutathione deficiency is associated with glucose 6-phosphate dehydrogenase deficiency, immune disorders, an increased incidence of malignancies, and in the case of HIV disease, probably accelerated pathogenesis of the disease. Acute manifestations of functional glutathione deficiency can be seen in those who have taken an overdosage of acetaminophen (paracetamol). This results in depletion of glutathione in the hepatocytes, leading to liver failure and death.

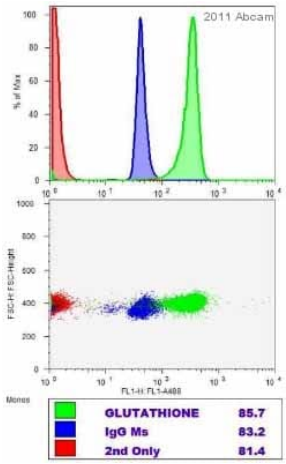
Images



Immunocytochemistry/ Immunofluorescence - Anti-Glutathione antibody [D8] (ab19534)

Image courtesy of Dr Mahesh Shivananjappa by Abreview.

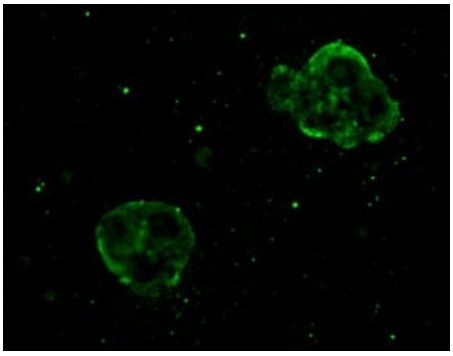
ab19534 staining Glutathione in cultured murine RAW 264.7 cells by Immunocytochemistry/ Immunofluorescence.
Cells were fixed in paraformaldehyde, permeabilized using 0.1% Triton-X100 in 2% BSA for 15 minutes, blocked with 2% BSA for 1 hour at 22°C and then incubated with ab19534 at a 1/150 dilution for 16 hours at 4°C. The secondary used was an Alexa-Fluor 488 conjugated goat anti-mouse IgG (H+L) used at a 1/1000 dilution.



Flow Cytometry - Anti-Glutathione antibody [D8] (ab19534)

Image courtesy of Dr Mahesh Shivananjappa by Abreview.

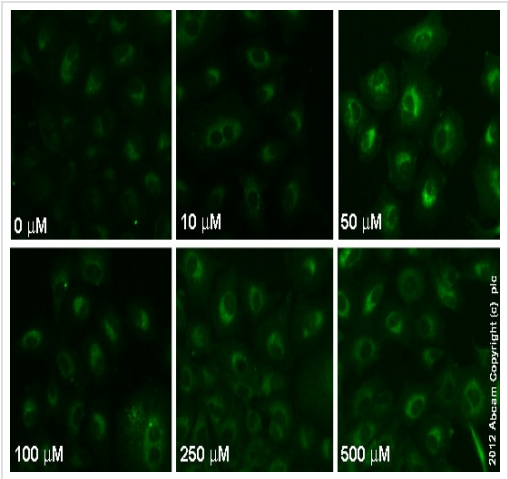
ab19534 at a 1/250 dilution detecting Glutathione in human monocytes by Flow Cytometry. An Alexa-Fluor 488 conjugated goat anti-mouse IgG (H+L) secondary was used at a 1/500 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Glutathione antibody [D8] (ab19534)

Image from Lim SY et al, J Biol Chem. 2010 May 7;285(19):14377-88. Epub 2010 Mar 11, Fig 4.

ab19534 staining Glutathione in human neutrophils by Immunocytochemistry/ Immunofluorescence.
Samples were fixed with 4% (w/v) paraformaldehyde in PBS, permeabilized with PBS containing 0.5% (w/v) saponin and 0.1% (w/v) bovine serum albumin, and then blocked with 1% (w/v) bovine serum albumin in PBS for 1 hour. ab19534 was used at 5µg/ml for 2 hours at room temperature. After washing with PBS, cells were incubated with Alexa 488-conjugated anti-mouse IgG at a 1/200 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Glutathione antibody [D8] (ab19534)

ab19534 staining glutathione in A549 cells treated with apocynin (**ab120615**), by ICC/IF. Increase in glutathione expression correlates with increased concentration of apocynin, as described in literature.

The cells were incubated at 37°C for 24h in media containing different concentrations of **ab120615** (apocynin) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with ab19534 (10 µg/ml) was performed overnight at 4øC in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-mouse polyclonal antibody (**ab96879**) at 1/250 dilution was used as the secondary antibody.

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