abcam

ab19534

Anti-Glutathione antibody [D8]

Anti-Glutathione antibody [D8] (ab19534) is a mouse monoclonal antibody detecting Glutathione in **Flow Cytometry, ICC/IF**.

- Over 40 publications
- Trusted since 2007

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.2 - 7.6 Preservative: 0.01% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Chemical / Small Molecule corresponding to Glutathione.
Clone number	D8
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Chemical
Dilution info	-

Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Chemical
Dilution info	10 µg/mL
Notes	-

Target data

See full target information Glutathione

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Notes

Product Specifications

Anti-Glutathione antibody [D8] (ab19534) is a mouse monoclonal antibody and is validated for use in Flow Cyt, ICC/IF in species independent samples.
Anti-Glutathione antibody [D8] (ab19534) specifically detects Glutathione (UniProt ID: ; Molecular weight: kDa) and is sold in 100 µg selling sizes.

Quality and Validation

Abcam's high quality validation processes ensure Anti-Glutathione antibody [D8] (ab19534) has high sensitivity and specificity.

Anti-Glutathione antibody [D8] (ab19534) has been cited over 46 times in peer reviewed journals and is trusted by the scientific community.
Anti-Glutathione antibody [D8] (ab19534) has 10 independent reviews from customers.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Glutathione often referred to as GSH is a small tripeptide with a molecular mass of approximately 307.33 g/mol. It is composed of amino acids glutamine cysteine and glycine. Glutathione is found in almost all cells with high concentrations especially in the liver. As a powerful antioxidant it functions by reducing reactive oxygen species (ROS) and maintaining the redox status of cells. Glutathione exists in two forms: reduced (GSH) and oxidized (GSSG). The balance between these forms known as the GSH/GSSG ratio is critical for cellular health and is commonly assessed using a glutathione assay kit.
Biological function summary	Glutathione plays an important role in detoxification processes protecting cells from damage caused by free radicals peroxides and heavy metals. It acts as a substrate for various enzymes like glutathione peroxidase and glutathione S-transferase involved in neutralizing oxidative damage. Glutathione doesn't typically form a complex but it does participate in disulfide bond exchange reactions which are critical in maintaining cellular protein functions and structures.
Pathways	Glutathione is integral to cellular antioxidant defense and phase II detoxification pathways. It closely interacts with proteins like glutathione peroxidase in the reduction of hydrogen peroxide to water. Also glutathione's role in the pentose phosphate pathway supports the regeneration of NADPH which is essential for maintaining the reduced form of glutathione. This interplay is important for protecting cells against oxidative stress and ensuring cellular energy is balanced.
Associated diseases and disorders	Glutathione has significant implications in conditions such as Parkinson's disease and liver cirrhosis. In Parkinson's disease researchers observe lower levels of glutathione in affected brain regions suggesting an important role in neurodegeneration. Glutathione levels also impact liver health with deficiencies leading to ineffective detoxification and the potential for liver damage or cirrhosis. In these contexts glutathione interacts with proteins involved in redox balance and neurotransmitter regulation emphasizing its broad significance in maintaining human health.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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4 product images

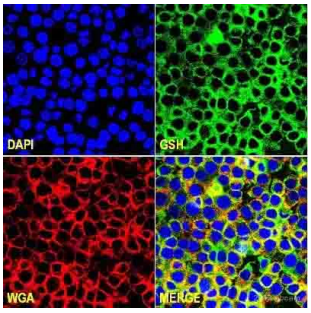


Image courtesy of Dr Mahesh Shivananjappa by customer review.

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

Glutathione Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Glutathione antibody

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.

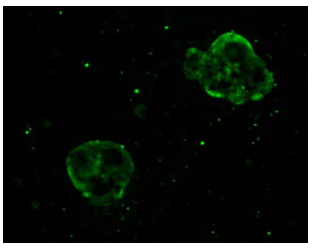


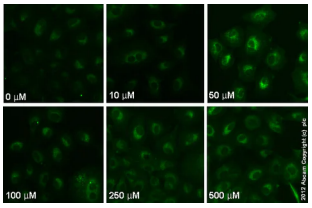
Image from Lim SY et al, J Biol Chem. 2010 May 7;285(19):14377-88. Epub 2010 Mar 11, Fig 4.

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

Glutathione Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Glutathione antibody

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)

Glutathione Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Glutathione antibody

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.

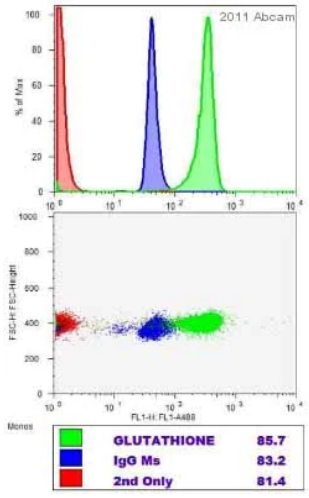


Image courtesy of Dr Mahesh Shivananjappa by customer review.

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

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.