



# Cysteine (3A4): sc-69954

## BACKGROUND

Cysteine is a non-essential  $\alpha$ -amino acid that contains a free thiol (-SH) side chain and is an important functional and structural component of a variety of proteins. Found in foods such as eggs, milk, pork, oats, onions and garlic, Cysteine has antioxidant and metal-ion binding properties and is used in the pharmaceutical, food and personal care industries. Cysteine, the most chemically reactive amino acid under physiological conditions, oxidizes to form a dimer that is joined by a disulfide bond and is known as cystine. Similar to protein modification by phosphorylation or glycosylation, proteins can be post-translationally modified via cysteinylolation (the addition of a Cysteine residue to a peptide). Due to the high amount of Cysteine within the cell, cysteinylolation is one of the most common posttranslational protein modifications and it can indicate events such as inflammation or oxidative stress.

## REFERENCES

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4. Haque, M.A., et al. 2001. Cysteinylolation of MHC class II ligands: peptide endocytosis and reduction within APC influences T cell recognition. *J. Immunol.* 166: 4543-4551.
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## SOURCE

Cysteine (3A4) is a mouse monoclonal antibody raised against Cysteine.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Cysteine (3A4) is recommended for detection of Cysteine by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.