abcam

Product datasheet

Anti-Taurine antibody ab9448

1 References

Overview

Product name	Anti-Taurine antibody
Description	Rabbit polyclonal to Taurine
Host species	Rabbit
Specificity	The antibody is calibrated against a spectrum of antigens to assure hapten selectivity. Fixed tissue cross-reactivity was tested with known targets at the recommended dilution. No measurable glutaraldehyde-fixed tissue cross-reactivity (<1:1000) was detected against L-alanine, gamma-aminobutyrate, agmatine, guanidine, D/L-arginine, L-citrulline, L-cysteine, D/L-glutamate, D/L-glutamine, glutathione, glycine, L-lysine, L-ornithine, L-serine, L-threonine, L-tryptophan, L-tyrosine.
Tested applications	**Suitable for:** IHC-FoFr, IHC-Fr, ICC, Immunomicroscopy
Immunogen	Chemical/ Small Molecule by a Glutaraldehyde linker.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Thimerosal (merthiolate) Constituents: 1% Goat Serum, 0.268% PBS
Purity	IgG fraction
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab9448** 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
IHC-FoFr		

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IHC-Fr		
ICC		
Immunomicroscopy		

Application notes

This antibody is recommended for thin section post-embedding endogenous content mapping by Light and Electron microscopy immunostaining via High Performance Immunocytochemistry (HPI) (see "Protocols" tab above)

Recommended user dilution: 1/100
High-performance thin section immunostaining using silver-intensified immunogold or fluorescence detection.
Enhanced detection is possible using streptavidin detection.
EM applications with 10-40 nm gold GAR IgGs or gold streptavidin.

OPTIMAL FIXATION: 0.05-2.5% glutaraldehyde,1% formaldehyde using HPI protocol (The antisera targets the glutaraldehyde conjugate of the hapten).
MINIMAL GLUTARALDEHYDE: 0.00% using minimum glutaraldehyde Enhanced HPI (EHPI) protocol with 4% formaldehyde (see "Protocols" tab above)

The hapten is osmium tolerant (deosmication required), therefore the antisera can be used on conventional post-embedding electron microscope immunostaining.

All procedures may be carried out at room temperature. Exact dilutions for all applications cannot be predicted, but it is unlikely that deviations from the calibrated levels will be needed. Dilutions are optimized for antigen detection over a 2 log unit range.

The product is optimized for HPI/EHPI with gold or fluorescence detection using etched plastic sections. Filter diluted reagents with 0.2 mm syringe filters before use on EM grids. Enzyme-linked visualizations can be used but will compress the signal dynamic range and are less sensitive.

Use with frozen or vibratome sections is possible but will not yield optimal images as IgGs penetrate aldehyde cross-linked tissue poorly and most amino acids are present at such high levels that prozone effects occur. Use in whole mounts is not recommended for similar reasons.

Target

Relevance

Taurine is conjugated via its amino terminal group with the bile acids chenodeoxycholic acid and cholic acid to form the bile salts sodium taurochenodeoxycholate and sodium taurocholate. The low pKa (1.5) of taurine's sulfonic acid group ensures that this moiety is negatively charged in the pH ranges normally found in the intestinal tract and thus improves the surfactant properties of the cholic acid conjugate. Taurine has also been implicated in a wide array of other physiological phenomena including inhibitory neurotransmission, long-term potentiation in the striatum/hippocampus, membrane stabilization, feedback inhibition of neutrophil/macrophage respiratory bursts, adipose tissue regulation and calcium homeostasis. The evidence for these claims, when compared against that reported for taurine's role in bile acid synthesis and

osmoregulation, is relatively poor. Premature born infants who lack the enzymes needed to convert cystathione to cysteine may become deficient in taurine. Thus, taurine is a dietary essential nutrient in these individuals. Many therapeutic applications of taurine have been investigated. Some conditions that taurine might be useful in treating include: cardiovascular diseases, hypercholesterolemia, epilepsy and other seizure disorders, macular degeneration, Alzheimer's disease, hepatic disorders, alcoholism, and cystic fibrosis. Recent studies show that taurine supplements taken by mice on a high-fat diet reduced their overall weight. Studies have yet to be done on the effect of taurine on obesity in humans.

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