Product datasheet

Anti-Metallothionein antibody [UC1MT] ab12228

Overview

Product name                     Anti-Metallothionein antibody [UC1MT]
Description                      Mouse monoclonal [UC1MT] to Metallothionein
Host species                     Mouse
Tested applications              Suitable for: IHC-Fr, ICC/IF, WB, Flow Cyt, IHC-P
Species reactivity               Reacts with: Mouse, Rat, Rabbit, Horse, Dog, Human, Mummichug fish
Immunogen                        Full length protein corresponding to Rabbit Metallothionein.
Positive control                 HeLa cell lysate treated with 100uM CdCl2 Rehydrated rabbit liver MTI/MTII
General notes                    This product was changed from ascites to tissue culture supernatant on 22nd May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Properties

Form                             Liquid
Storage instructions            Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer                  pH: 7.20
                                Preservative: 0.09% Sodium azide
                                Constituents: 2.68% PBS, 50% Glycerol
Purity                          Tissue culture supernatant
Purification notes             Purified from TCS.
Clonality                       Monoclonal
Clone number                    UC1MT
Isotype                         IgG1

Applications

Our Abpromise guarantee covers the use of ab12228 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. Detects a band of approximately 6-20 kDa (predicted molecular weight: 6 kDa). Please note: often Western blots done on cell lysates with this antibody produce many bands; we suspect that metallothionein binds to many other proteins, thus producing these results. As the predicted MW is around 6 kDa, use 12.5-20% gel and be sure the protein is not run off the gel during electrophoresis.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use at an assay dependent concentration. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Target**

**Function**
Metallothioneins have a high content of cysteine residues that bind various heavy metals; these proteins are transcriptionally regulated by both heavy metals and glucocorticoids.

**Sequence similarities**
Belongs to the metallothionein superfamily. Type 1 family.

**Domain**
Class I metallothioneins contain 2 metal-binding domains: four divalent ions are chelated within cluster A of the alpha domain and are coordinated via cysteinyl thiolate bridges to 11 cysteine ligands. Cluster B, the corresponding region within the beta domain, can ligate three divalent ions to 9 cysteines.

**Images**

Anti-Metallothionein antibody [UC1MT] (ab12228) + Hela cell lysate

**Secondary**
HRP-conjugated antibody.

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 6 kDa

**Exposure time:** 2 minutes

This image was generated using the ascites version of the product.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Metallothionein antibody [UC1MT] (ab12228)

ab12228 staining human uterus tissue at 10 µg/ml using IHC-P. This image was generated using the ascites version of the product.

Immunocytochemistry/ Immunofluorescence - Anti-Metallothionein antibody [UC1MT] (ab12228)

ICC/IF image of ab12228 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab12228, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This image was generated using the ascites version of the product.

Flow Cytometry - Anti-Metallothionein antibody [UC1MT] (ab12228)

Overlay histogram showing HeLa cells stained with ab12228 (red line). The cells were fixed with 100% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab12228, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was Mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This image was generated using the ascites version of the product.
Anti-Metallothionein antibody [UC1MT] (ab12228) at 1/1000 dilution
+ Rabbit liver lysates

**Predicted band size:** 6 kDa

This image was generated using the ascites version of the product.

ICC/IF image of ab12228 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab12228, 10µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-mouse IgG - H&L, pre-adsorbed (ab96879) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

This image was generated using the ascites version of the product.
Western blot - Anti-Metallothionein antibody [UC1MT] (ab12228)

All lanes: Anti-Metallothionein antibody [UC1MT] (ab12228)

Lane 1: Marker
Lane 2: MTI
Lane 3: MTII
Lane 4: Mummichug CdCl2

Predicted band size: 6 kDa

This image was generated using the ascites version of the product.

Immunohistochemistry (Frozen sections) - Anti-Metallothionein antibody [UC1MT] (ab12228)

ab12228 staining catfish kidney tissue sections by IHC-Fr. Sections were acetone fixed and blocked with a commercial blocking agent prior to incubation with the primary antibody, diluted 1/50, for 16 hours at 4°C. An Alexa Fluor® 488 conjugated goat anti-mouse antibody, diluted 1/1000, was used as the secondary.

This image was generated using the ascites version of the product.

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