



## Product datasheet

### Anti-DMT1 antibody [4C6] ab55735

★★★★★ [2 Abreviews](#) [29 References](#) [4 Images](#)

#### Overview

<b>Product name</b>	Anti-DMT1 antibody [4C6]
<b>Description</b>	Mouse monoclonal [4C6] to DMT1
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt, IHC-P, IHC-Fr, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human, Recombinant fragment
<b>Immunogen</b>	Recombinant fragment corresponding to Human DMT1 aa 1-65. Sequence:  MVLGPEQKMSDDSVSGDHGESASLGNNPAYSNP SLSQ SPGDSEEFATYFNEKISIP EEEYSCF  Database link: <a href="#">P49281</a>   <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	IHC-P: Human endometrium cance Flow cyt: SH-SY5Y cells
<b>General notes</b>	<p>This product was changed from ascites to tissue culture supernatant on 17/04/2019. 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.</p> <p>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.</p> <p>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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.40 Constituents: 8% Sodium chloride, 0.2% Monobasic dihydrogen potassium phosphate, 0.2%

	Potassium chloride, 0.6% Dibasic monohydrogen sodium phosphate, 91% Water
<b>Purity</b>	Tissue culture supernatant
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	4C6
<b>Isotype</b>	IgG2a
<b>Light chain type</b>	kappa

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab55735 in the following tested applications.

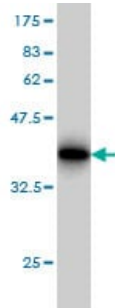
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>Flow Cyt</b>		Use at an assay dependent concentration. <b>ab170191</b> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
<b>IHC-P</b>		Use at an assay dependent concentration.
<b>IHC-Fr</b>	★★★★★ (1)	Use at an assay dependent concentration.
<b>WB</b>		Use at an assay dependent concentration. Predicted molecular weight: 62 kDa.

## Target

<b>Function</b>	Important in metal transport, in particular iron. Can also transport manganese, cobalt, cadmium, nickel, vanadium and lead. Involved in apical iron uptake into duodenal enterocytes. Involved in iron transport from acidified endosomes into the cytoplasm of erythroid precursor cells. May play an important role in hepatic iron accumulation and tissue iron distribution.
<b>Tissue specificity</b>	Ubiquitously expressed. Isoform 1 is highly expressed in brain. Isoform 2 is highly expressed in spleen, thymus and pancreas. Isoform 3 and isoform 4 are abundantly expressed in duodenum and kidney.
<b>Involvement in disease</b>	Defects in SLC11A2 are a cause of hypochromic microcytic anemia (HCMA) [MIM:206100]. The disease is characterized by an abnormal hemoglobin content in the erythrocytes which are reduced in size. It may be hereditary or acquired. Mutations in SLC11A2 are associated with progressive liver iron overload and normal to moderately elevated serum ferritin levels.
<b>Sequence similarities</b>	Belongs to the NRAMP family.
<b>Post-translational modifications</b>	Ubiquitinated by WWP2.
<b>Cellular localization</b>	Endosome membrane.

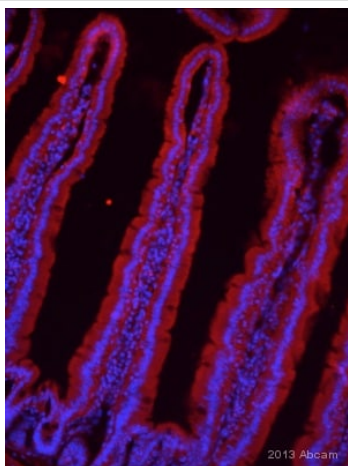
## Images



Western blot - Anti-DMT1 antibody [4C6] (ab55735)

Western blot against tagged recombinant protein fragment (immunogen peptide) using ab55735 DMT1 antibody at 1ug/ml.

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

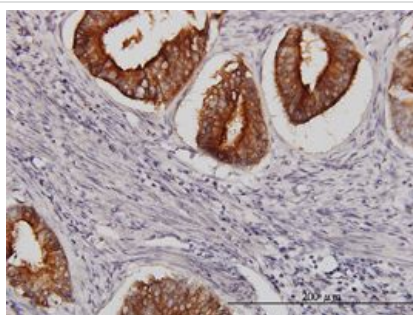


Immunohistochemistry (Frozen sections) - Anti-DMT1 antibody [4C6] (ab55735)

This image is courtesy of an abreview submitted by Dr. Ruma Raha-Chowdhury, Cambridge University, United Kingdom.

IHC-Fr image of DMT1 staining on mouse duodenum using ab55735 (1:1000). The sections were fixed with paraformaldehyde and permeabilized using 0.1% TritonX in 0.1% PBS. The slides were blocked using 10 % donkey serum for 1 hour at 24°C. ab55735 was diluted 1:1000 using 0.1% TritonX with 0.1x PBS-10% Donkeys and incubated with the slides at 4°C for 24 hours. The secondary antibody used was donkey polyclonal against mouse IgG conjugated to Alexa Fluor 568 (1:1000)

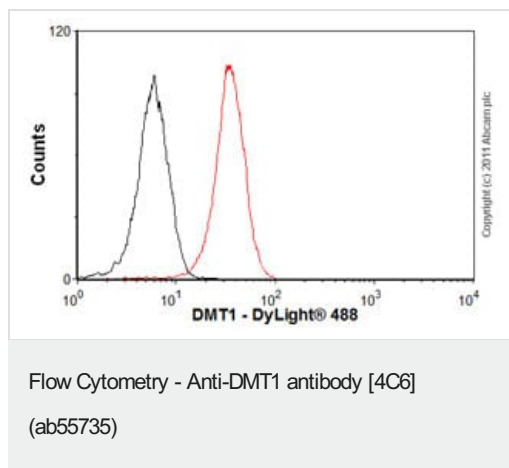
This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-DMT1 antibody [4C6] (ab55735)

DMT1 antibody (ab55735) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human endometrium cancer.

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



Overlay histogram showing SH-SY5Y cells stained with ab55735 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab55735, 1µg/1x10<sup>6</sup> 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 IgG2a [ICIGG2A] ([ab91361](#), 1µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol/permeabilized in 0.1% PBS-Tween used under the same conditions.

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

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