

Product datasheet

Anti-Calnexin antibody [CANX/1543] ab238078

KO VALIDATED

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Overview

Product name	Anti-Calnexin antibody [CANX/1543]
Description	Mouse monoclonal [CANX/1543] to Calnexin
Host species	Mouse
Tested applications	Suitable for: Protein Array, IHC-P, WB
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment within Human Calnexin aa 1-300. The exact sequence is proprietary. Database link: P27824
Positive control	IHC-P: Human renal cell carcinoma tissue. WB: HEK-293T, U-2 OS, PANC1 and MCF7 cell lysates; Human kidney lysate.
General notes	<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&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Purity	Protein A/G purified
Purification notes	Purified from Bioreactor Concentrate by Protein A/G.
Clonality	Monoclonal
Clone number	CANX/1543

Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab238078 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
Protein Array		Use at an assay dependent concentration.
IHC-P		Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Primary incubation for 30 minutes at room temperature.
WB		Use a concentration of 1 - 2 µg/ml. Predicted molecular weight: 68 kDa.

Target

Function

Calcium-binding protein that interacts with newly synthesized glycoproteins in the endoplasmic reticulum. It may act in assisting protein assembly and/or in the retention within the ER of unassembled protein subunits. It seems to play a major role in the quality control apparatus of the ER by the retention of incorrectly folded proteins.

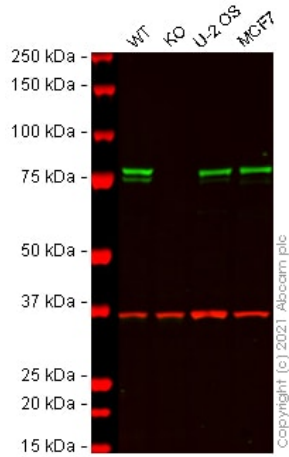
Sequence similarities

Belongs to the calreticulin family.

Cellular localization

Endoplasmic reticulum membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Images



Western blot - Anti-Calnexin antibody [CANX/1543]
(ab238078)

All lanes : Anti-Calnexin antibody [CANX/1543] (ab238078) at 1 $\mu\text{g/ml}$

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : CANX knockout HEK-293T cell lysate

Lane 3 : U-2 OS cell lysate

Lane 4 : MCF7 cell lysate

Lysates/proteins at 20 μg per lane.

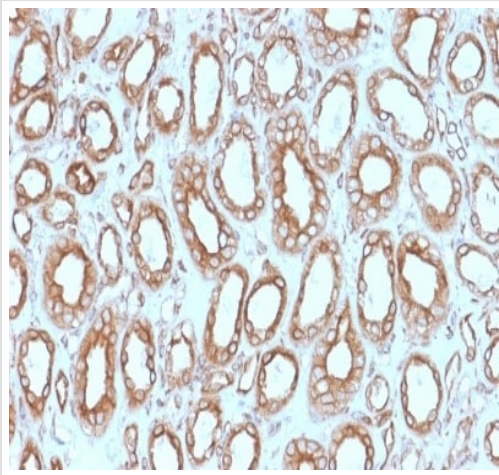
Performed under reducing conditions.

Predicted band size: 68 kDa

Observed band size: 80 kDa

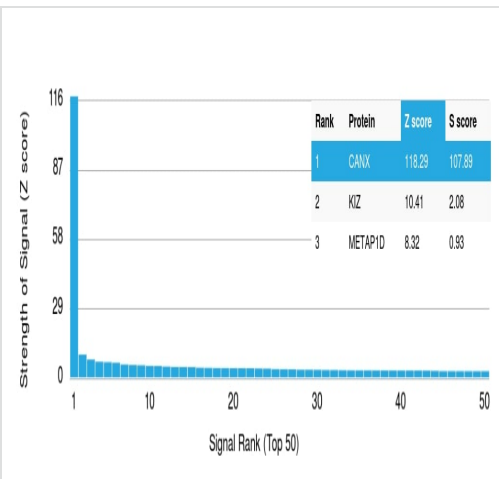
Lanes 1 - 4: Merged signal (red and green). Green - ab238078 observed at 80 kDa. Red - loading control **ab181602** (Rabbit Anti-GAPDH antibody [EPR16891]) observed at 37 kDa.

ab238078 was shown to react with Calnexin in wild-type HEK-293T cells in Western blot with loss of signal observed in CANX knockout cell line **ab255368** (CANX knockout cell lysate **ab263805**). Wild-type HEK-293T and CANX knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween[®]) before incubation with ab238078 and **ab181602** (Rabbit Anti-GAPDH antibody [EPR16891]) overnight at 4 °C at 1 $\mu\text{g/ml}$ and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Mouse IgG H&L (IRDye[®] 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye[®] 680RD) preabsorbed (**ab216777**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calnexin antibody [CANX/1543] (ab238078)

Formalin-fixed, paraffin-embedded human renal cell carcinoma tissue stained for Calnexin using ab238078 at 2 µg/ml in immunohistochemical analysis.

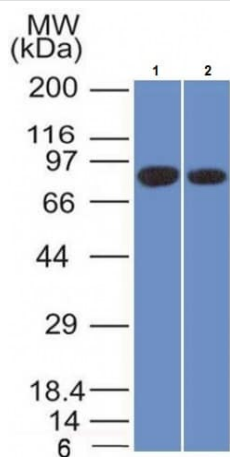


Protein Array - Anti-Calnexin antibody [CANX/1543] (ab238078)

ab238078 was tested in protein array against over 19000 different full-length human proteins.

Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt™ are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target.

A MAb is specific to its intended target if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



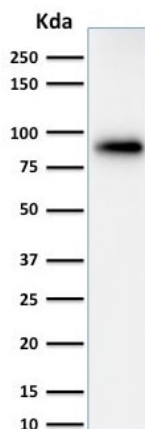
Western blot - Anti-Calnexin antibody [CANX/1543]
(ab238078)

All lanes : Anti-Calnexin antibody [CANX/1543] (ab238078) at 2 μ g/ml

Lane 1 : PANC-1 (human pancreatic epithelial carcinoma cell line) cell lysate

Lane 2 : MCF7 (human breast adenocarcinoma cell line) cell lysate

Predicted band size: 68 kDa



Western blot - Anti-Calnexin antibody [CANX/1543]
(ab238078)

Anti-Calnexin antibody [CANX/1543] (ab238078) at 2 μ g/ml +
Human kidney lysate

Predicted band size: 68 kDa

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