Anti-Calreticulin Antibody [7B2]

EM1701-61

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Cell, FC
Molecular Wt:	Predicted band size: 48 kDa
Clone number:	7B2

Description: Calnexin and calregulin (also called calreticulin) are calcium-binding proteins that are localized to the endoplasmic reticulum, Calnexin to the membrane and calregulin to the lumen. Calnexin is a type I membrane protein that interacts with newly synthesized glycoproteins in the endoplasmic reticulum. It may play a role in assisting with protein assembly and in retaining unassembled protein subunits in the endoplasmic reticulum. Calregulin has both low- and high-affinity calcium-binding sites. Neither Calnexin nor calregulin contains the calcium-binding "E-F hand" motif found in calmodulins. Calnexin and calregulin are important for the maturation of glycoproteins in the endoplasmic reticulum and appear to bind many of the same proteins.

Immunogen: Recombinant full length protein corresponding to Human Calretinin aa 1 to the C-terminus.

Positive control: HepG2 cell lysate, HeLa cell lysate, HL-60 cell lysate, HeLa , human thyroid gland tissue, human prostate cancer tissue, human placenta tissue, Jurkat.

Subcellular location: Endoplasmic reticulum. Secreted. Cytosol.

Database links: SwissProt: P27797 Human

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:250
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein G affinity purified.

Images

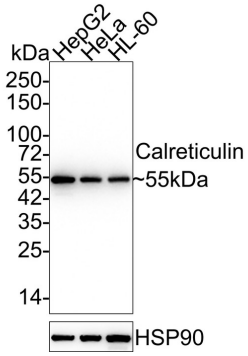

Fig1: Western blot analysis of Calreticulin on different lysates with Mouse anti-Calreticulin antibody (EM1701-61) at 1/5,000 dilution.

Lane 1: HepG2 cell lysate (20 µg/Lane)
Lane 2: HeLa cell lysate (20 µg/Lane)
Lane 3: HL-60 cell lysate (20 µg/Lane)

Predicted band size: 48 kDa
Observed band size: 55 kDa

Exposure time: 1 minute;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM1701-61) at 1/5,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

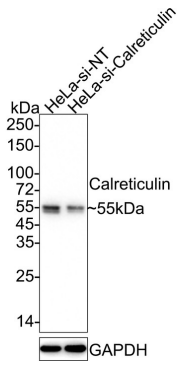

Fig2: Western blot analysis of Calreticulin on different lysates with Mouse anti-Calreticulin antibody (EM1701-61) at 1/50,000 dilution.

Lane 1: HeLa-si NT cell lysate
Lane 2: HeLa-si Calreticulin cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 55 kDa

Exposure time: 13 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM1701-61) at 1/50,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

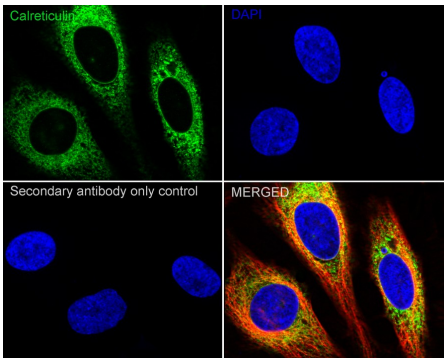

Fig3: Immunocytochemistry analysis of HeLa cells labeling Calreticulin with Mouse anti-Calreticulin antibody (EM1701-61) at 1/250 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-Calreticulin antibody (EM1701-61) at 1/250 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) was used as the secondary antibody at 1/1,000 dilution.

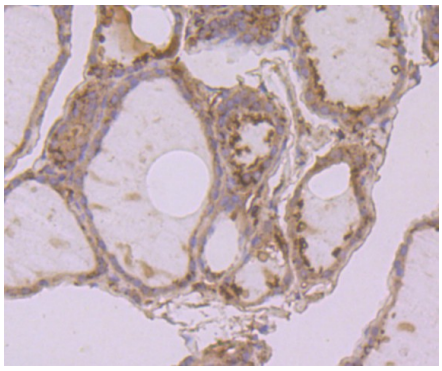

Fig4: Immunohistochemical analysis of paraffin-embedded human thyroid gland tissue using anti-Calreticulin antibody. Counter stained with hematoxylin.

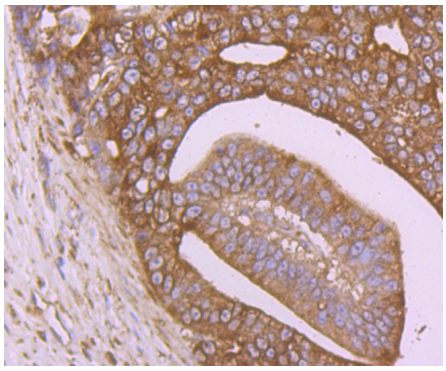

Fig5: Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue using anti-Calreticulin antibody. Counter stained with hematoxylin.

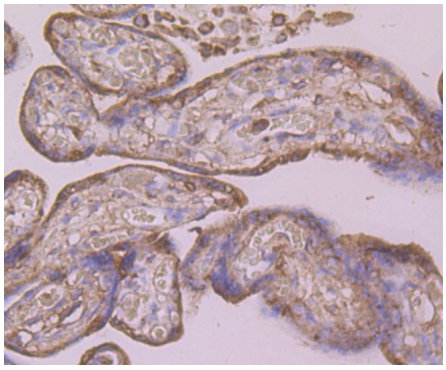

Fig6: Immunohistochemical analysis of paraffin-embedded human placenta tissue using anti-Calreticulin antibody. Counter stained with hematoxylin.

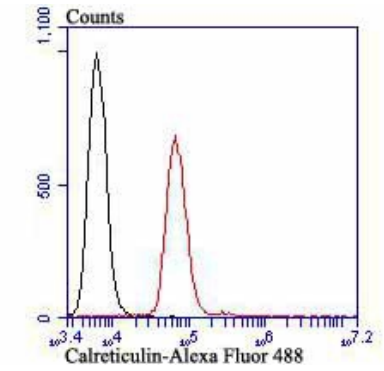

Fig7: Flow cytometric analysis of Jurkat cells with Calreticulin antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti-mouse IgG was used as the secondary antibody.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Nauseef W M et al. Calreticulin functions as a molecular chaperone in the biosynthesis of myeloperoxidase. J Biol Chem 270:4741-4747 (1995).
2. Holaska J M et al. Calreticulin is a receptor for nuclear export. J Cell Biol 152:127-140 (2001).