Anti-Calreticulin Antibody [7B1]

EM1701-60

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:	7B1

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, HepG2, human prostate cancer tissue, Jurkat.

Subcellular location: Endoplasmic reticulum. Secreted. Cytosol.

Database links: SwissProt: P27797 Human

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:50-1:200
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

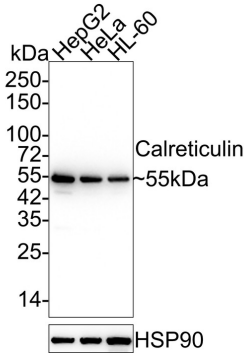

Fig1: Western blot analysis of Calreticulin on different lysates with Mouse anti-Calreticulin antibody (EM1701-60) at 1/5,000 dilution.

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 (EM1701-60) 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.

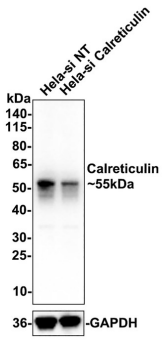

Fig2: Western blot analysis of Calreticulin on different lysates with Mouse anti-Calreticulin antibody (EM1701-60) at 1/500 dilution.

Lane 1: Hela-si NT cell lysate (10 µg/Lane)
Lane 2: Hela-si Calreticulin cell lysate (10 µg/Lane)

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

Exposure time: 5 seconds;

4-20% SDS-PAGE gel.

EM1701-60 was shown to specifically react with Calreticulin in Hela-si NT cells. Weakened band was observed when Hela-si Calreticulin sample was tested. Hela-si NT and Hela-si Calreticulin samples were subjected to SDS-PAGE. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (EM1701-60, 1/500) and Loading control antibody (Rabbit anti-GAPDH, ET1601-4, 1/10,000) were used in 5% BSA at room temperature for 2 hours. Goat Anti-mouse IgG-HRP Secondary Antibody (HA1006) at 1:150,000 dilution was used for 1 hour at room temperature.

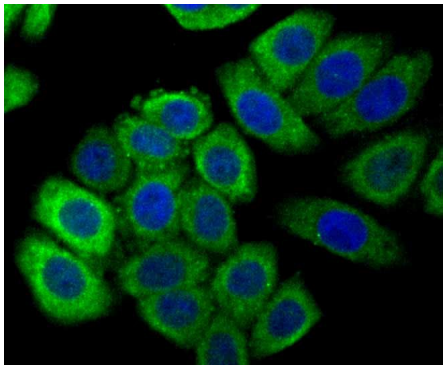

Fig3: ICC staining Calreticulin (green) in HepG2 cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

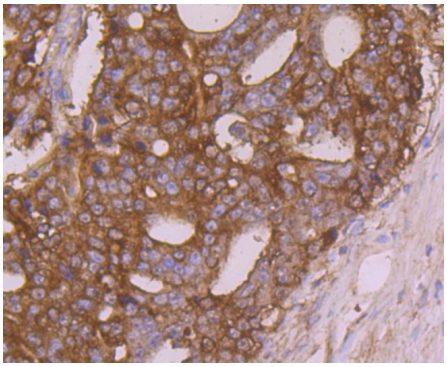

Fig4: Immunohistochemical analysis of paraffin-embedded human prostate cancer tissue using anti-Calreticulin antibody. Counter stained with hematoxylin.

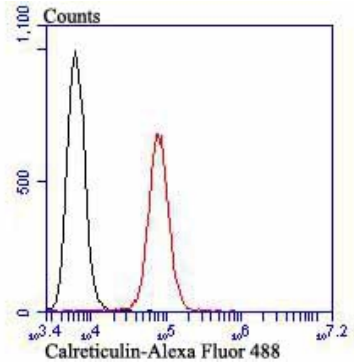

Fig5: Flow cytometric analysis of Jurkat cells with Calreticulin antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti-mouse IgG was used as the secondary antibody.

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).