

## Product Datasheet

### Calreticulin Antibody (Biotin) (orb151513)

**Catalog Number** orb151513

**Category** Antibodies

**Description** Rabbit polyclonal to Calreticulin (Biotin). Calreticulin is a multifunctional, highly conserved Ca<sup>2+</sup>-binding protein that is localized to the endoplasmic reticulum (ER), but has also been detected in the nucleus and nuclear envelop. Like many other ER proteins, it has the conserved ER retention KDEL (Lys-Asp-Glu-Leu) sequence at its C-terminus (1-3). CRTs three domains include a 180 residue N-terminal domain, a proline-rich P-domain (residues 189-288) that binds Ca<sup>2+</sup> with high affinity and shares homology with calnexin (CNX) and calmegin, and a 110 residue C-terminal domain that binds Ca<sup>2+</sup> with low affinity but high capacity (1,3). Recent studies suggest that this soluble ER protein has a multifunctional role. It appears to be involved in calcium storage and regulation as well as having a molecular chaperone activity. It has been shown to interact with the cytoskeleton and to be involved in the regulation of gene expression. Calreticulin may also play a role in cellular proliferation including its apparent activity in the proliferation of certain viruses within mammalian host cells , and it has also been shown to be induced in response to various types of cell stress including amino acid deprivation. Close interconnections among protein synthesis, gene expression and calcium signaling have been observed by many researchers in recent years. Calreticulin might be centrally located and therefore it crucially participates in the coordination of many functions by the cell. Studies also suggest its involvement in a few diseases such as systemic lupus erythematosus, rheumatoid arthritis, celiac disease, complete congenital heart block, and halothane hepatitis..

**Target** Calreticulin

**Clonality** Polyclonal

**Species/Host** Rabbit

**Conjugation** Biotin

#### **Biorbyt Ltd.**

7 Signet Court, Swann Road  
Cambridge  
CB5 8LA  
United Kingdom

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

#### **Biorbyt LLC**

68 TW Alexander Drive  
Research Triangle Park  
Durham  
NC 27713  
United States

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

<b>Reactivity</b>	Bovine, Canine, Gallus, Guinea pig, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Sheep
<b>Concentration</b>	1 mg/ml
<b>Buffer/Preservatives</b>	136.36mM Ethanolamine, 133.23 mM Chlorides, 9.55mM Phosphates, 9.55mM Sodium Bicarbonate.
<b>Purification</b>	Peptide Affinity Purified
<b>Immunogen</b>	Human calreticulin synthetic peptide with a cysteine residue added and the peptide conjugated to KLH
<b>UniProt ID</b>	<b>P27797</b>
<b>MW</b>	63kDa
<b>Tested applications</b>	FC, ICC, IF, IHC, IP, WB
<b>Dilution range</b>	WB (1:1000), IHC (1:100), ICC/IF (1:100)
<b>Application notes</b>	A 1:1000 dilution of SPC-122 was sufficient for detection of Calreticulin in 20 µg of HeLa cell lysate by ECL immunoblot analysis.
<b>Specificity</b>	Detects ~63kDa.
<b>Storage</b>	Conjugated antibodies should be stored according to the product label
<b>Note</b>	For research use only
<b>Entrez</b>	<b>811</b>
<b>NCBI</b>	<b>NP_004334.1</b>

**Biorbyt Ltd.**

7 Signet Court, Swann Road  
Cambridge  
CB5 8LA  
United Kingdom

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

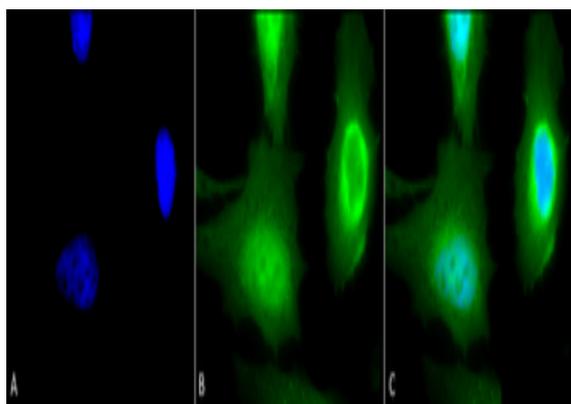
Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

**Biorbyt LLC**

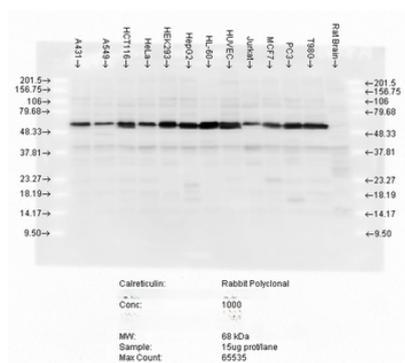
68 TW Alexander Drive  
Research Triangle Park  
Durham  
NC 27713  
United States

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

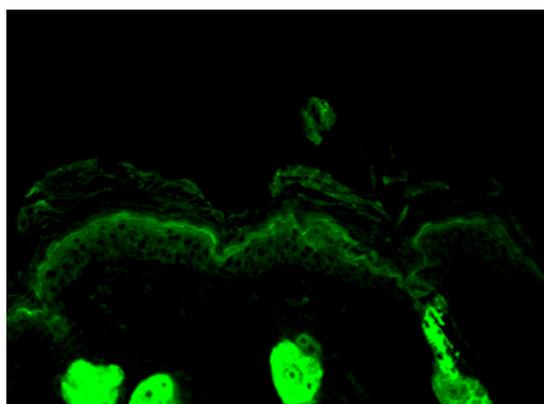
Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Calreticulin Polyclonal Antibody. Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Calreticulin Polyclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Cytoplasm. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Calreticulin Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Western blot analysis of multiple cell lines lysates showing detection of Calreticulin protein using Rabbit Anti-Calreticulin Polyclonal Antibody. Load: 15 µgprotein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-Calreticulin Polyclonal Antibody at 1:5000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunohistochemistry analysis using Rabbit Anti-Calreticulin Polyclonal Antibody. Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-Calreticulin Polyclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Cytoplasmic granule. Endoplasmic reticulum lumen.

**Biorbyt Ltd.**

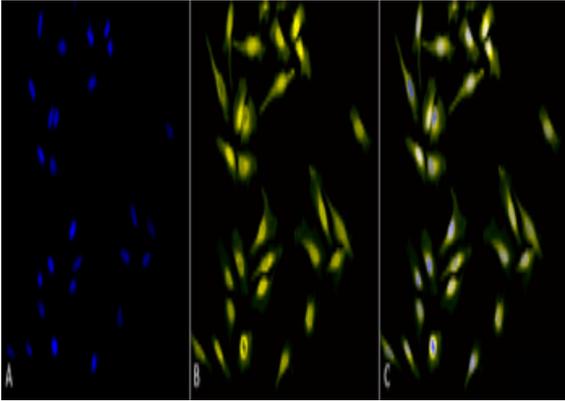
7 Signet Court, Swann Road  
 Cambridge  
 CB5 8LA  
 United Kingdom

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
 Phone: +44 (0)1223 859353 | Fax: +1 (415) 651-8558

**Biorbyt LLC**

68 TW Alexander Drive  
 Research Triangle Park  
 Durham  
 NC 27713  
 United States

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
 Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Calreticulin Polyclonal Antibody. Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Calreticulin Polyclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Cytoplasm. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-Calreticulin Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

**Biorbyt Ltd.**

7 Signet Court, Swann Road  
Cambridge  
CB5 8LA  
United Kingdom

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

**Biorbyt LLC**

68 TW Alexander Drive  
Research Triangle Park  
Durham  
NC 27713  
United States

Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)

Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)