

**CLEC7A Antibody**  
Catalog # ASC11480**Specification****CLEC7A Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">O9BXN2</a>
Other Accession	<a href="#">NP_922938</a> , <a href="#">37675373</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 27 kDa
Application Notes	Observed: 27 kDa KDa CLEC7A antibody can be used for detection of CLEC7A by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 5 µg/mL.

**CLEC7A Antibody - Additional Information**

Gene ID **64581**  
**Target/Specificity**  
CLEC7A; Multiple isoforms of CLEC7A are known to exist.

**Reconstitution & Storage**

CLEC7A antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

CLEC7A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**CLEC7A Antibody - Protein Information**

Name CLEC7A ([HGNC:14558](#))

**Function**

Lectin that functions as a pattern recognizing receptor (PRR) specific for beta-1,3-linked and beta-1,6-linked glucans, which constitute cell wall constituents from pathogenic bacteria and fungi (PubMed: [11567029](http://www.uniprot.org/citations/11567029), PubMed: [12423684](http://www.uniprot.org/citations/12423684)). Necessary for the TLR2-mediated inflammatory response and activation of NF-kappa-B: upon beta-glucan binding, recruits SYK via its ITAM motif and promotes a signaling cascade that activates some CARD domain-BCL10-MALT1 (CBM) signalosomes, leading to the activation of NF-kappa-B and MAP kinase p38 (MAPK11, MAPK12, MAPK13 and/or MAPK14) pathways which

stimulate expression of genes encoding pro-inflammatory cytokines and chemokines (By similarity). Enhances cytokine production in macrophages and dendritic cells (By similarity). Mediates production of reactive oxygen species in the cell (By similarity). Mediates phagocytosis of *C.albicans* conidia (PubMed:<a href="http://www.uniprot.org/citations/17230442" target="\_blank">17230442</a>). Binds T-cells in a way that does not involve their surface glycans and plays a role in T-cell activation. Stimulates T-cell proliferation. Induces phosphorylation of SCIMP after binding beta-glucans (By similarity).

#### Cellular Location

Cell membrane; Single-pass type II membrane protein [Isoform 6]: Cytoplasm.

#### Tissue Location

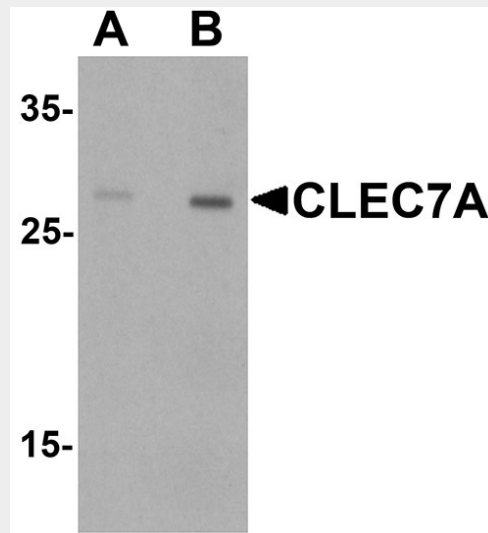
Highly expressed in peripheral blood leukocytes and dendritic cells. Detected in spleen, bone marrow, lung, muscle, stomach and placenta.

### CLEC7A Antibody - Protocols

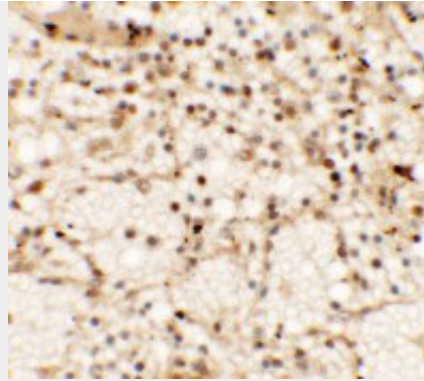
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

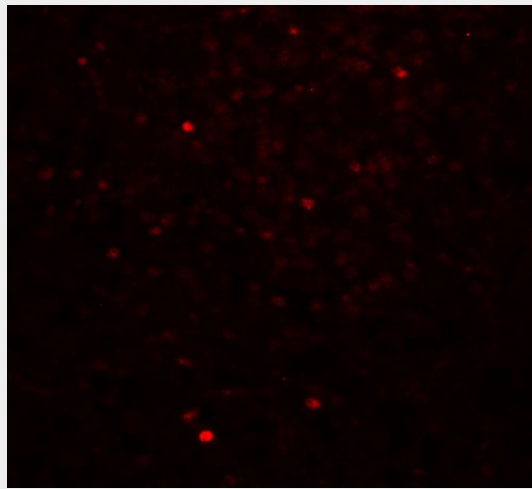
### CLEC7A Antibody - Images



Western blot analysis of CLEC7A in rat spleen tissue lysate with CLEC7A antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of CLEC7A in human spleen tissue with CLEC7A antibody at 5 µg/mL.



Immunofluorescence of CLEC7A in human spleen tissue with CLEC7A antibody at 20 µg/mL.

### **CLEC7A Antibody - Background**

CLEC7A Antibody: CLEC7A, also known as dectin-1, is a member of the C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily and is predominantly expressed on myeloid cells. It is a small glycoprotein type II membrane receptor with an extracellular C-type lectin-like domain fold and a cytoplasmic domain with an immunoreceptor tyrosine-based activation motif (ITAM). CLEC7A functions as a pattern-recognition receptor that recognizes a variety of beta-1,3-linked and beta-1,6-linked glucans from fungi and plants, and in this way plays a role in innate immune response. Upon fungal exposure, CLEC7A activates Syk tyrosine kinase, triggering a massive oxidative burst through the formation of reactive oxygen species.

### **CLEC7A Antibody - References**

Taylor PR, Brown GD, Reid DM, et al. The beta-glucan receptor, dectin-1, is predominantly expressed on the surface of cells of the monocyte/macrophage and neutrophil lineages. *J. Immunol.* 2002; 169:3876-82.

Ebner S, Sharon S, and Ben-Tal N. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. *Proteins* 2003; 53:44-55.

Kerrigan AM and Brown GD. Syk-coupled C-type lectin receptors that mediate cellular activation via single tyrosine based activation motifs. *Immunol. Rev.* 2010; 234:335-52.

Underhill DM, Rossmagle E, Lowell CA, et al. Dectin-1 activates Syk tyrosine kinase in a dynamic subset of macrophages for reactive oxygen production. *Blood* 2005; 106:2543-50.