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CLEC7A Antibody
Catalog # ASC11480

Specification

CLEC7A Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q9BXN2
Other Accession	NP_922938, 37675373
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 27 kDa** **Observed: 27 kDa KDa**
Application Notes	**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℃ for three months and -20℃, 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, PubMed: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:17230442). 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.

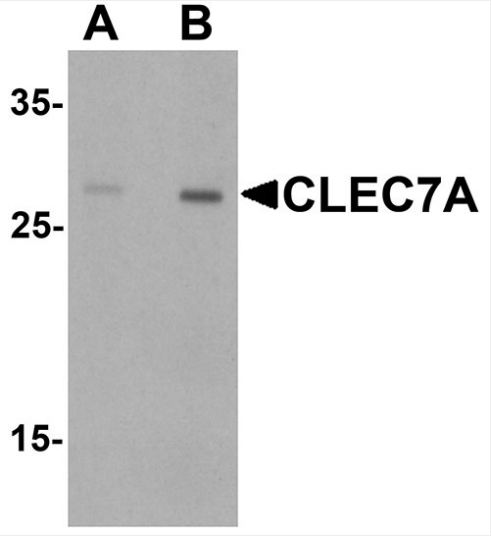
Tissue Location
Highly expressed in peripheral blood leukocytes and dendritic cells. Detected in spleen, bone marrow, lung, muscle, stomach and placenta.

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 Cytomety
- 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.

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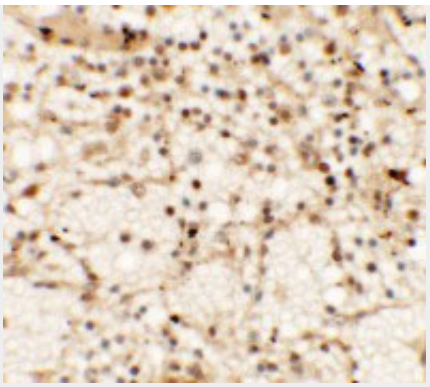
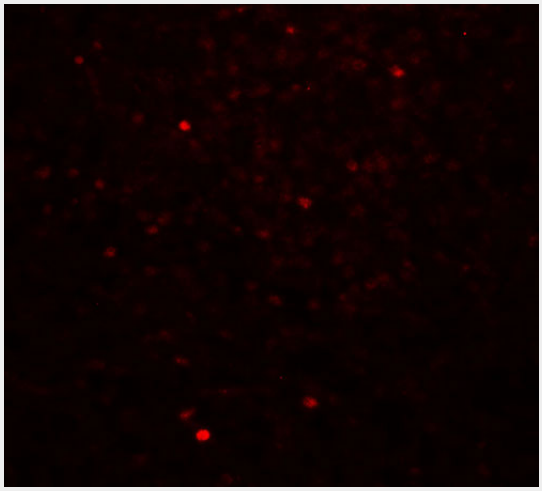


Immunohistochemistry of CLEC7A in human spleen tissue with CLEC7A antibody at 5 µg/mL.



Immunofluorescence of CLEC7A in human spleen tissue withCLEC7A 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, Rossnagle 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.