Anti-C4A Antibody

Description	This gene encodes the acidic form of complement factor 4, part of the classical activation pathway. The protein is expressed as a single chain precursor which is proteolytically cleaved into a trimer of alpha, beta, and gamma chains prior to secretion. The trimer provides a surface for interaction between the antigen-antibody complex and other complement components. The alpha chain is cleaved to release C4 anaphylatoxin, an antimicrobial peptide and a mediator of local inflammation. Deficiency of this protein is associated with systemic lupus erythematosus and type I diabetes mellitus. This gene localizes to the major histocompatibility complex (MHC) class III region on chromosome 6. Varying haplotypes of this gene cluster exist, such that individuals may have 1, 2, or 3 copies of this gene. Two transcript variants encoding different isoforms have been found for this gene.
Model	STJ117866
Host	Rabbit
Reactivity	Human
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 1200-1446 of human C4A (NP_009224.2).
Gene ID	720
Gene Symbol	C4A
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Complement component C4 is expressed at highest levels in the liver, at moderate levels in the adrenal cortex, adrenal medulla, thyroid gland,and the

	kidney, and at lowest levels in the heart, ovary, small intestine, thymus, pancreas and spleen, The extra-hepatic sites of expression may be important for the local protection and inflammatory response
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Complement C4-A Acidic complement C4 C3 and PZP-like alpha-2-macroglobulin domain-containing protein 2
Molecular Weight	192.785 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:1323OMIM:120790Reactome:R-HSA-166663
Alternative Names	Complement C4-A Acidic complement C4 C3 and PZP-like alpha-2-macroglobulin domain-containing protein 2
Function	Non-enzymatic component of C3 and C5 convertases and thus essential for the propagation of the classical complement pathway, Covalently binds to immunoglobulins and immune complexes and enhances the solubilization of immune aggregates and the clearance of IC through CR1 on erythrocytes, C4A isotype is responsible for effective binding to form amide bonds with immune aggregates or protein antigens, while C4B isotype catalyzes the transacylation of the thioester carbonyl group to form ester bonds with carbohydrate antigens
Cellular Localization	Secreted, Cell junction, synapse
Post-translational Modifications	Prior to secretion, the single-chain precursor is enzymatically cleaved to yield non-identical chains alpha, beta and gamma, During activation, the alpha chain is cleaved by C1 into C4a and C4b, and C4b stays linked to the beta and gamma chains, Further degradation of C4b by C1 into the inactive fragments C4c and C4d blocks the generation of C3 convertase, The proteolytic cleavages often are incomplete so that many structural forms can be found in plasma