

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide  
Mouse Monoclonal Antibody [Clone SPM545 ]  
Catalog # AH10784****Specification****Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide  
- Product Information**

Application	,14,3,10,
Primary Accession	<a href="#">POCOL4</a>
Other Accession	<a href="#">720</a> , <a href="#">721</a> , <a href="#">534847</a> , <a href="#">720022</a> , <a href="#">POCOL5</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Calculated MW	192kDa (predicted) KDa

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide  
- Additional Information**

**Gene ID** 720;721

**Other Names**

Complement C4-A, Acidic complement C4, C3 and PZP-like alpha-2-macroglobulin domain-containing protein 2, Complement C4 beta chain, Complement C4-A alpha chain, C4a anaphylatoxin, C4b-A, C4d-A, Complement C4 gamma chain, C4A, CO4, CPAMD2

**Format**

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide  
- Protein Information**

**Name** C4A

**Synonyms** CO4, CPAMD2

**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 Location**

Secreted. Synapse. Cell projection, axon. Cell projection, dendrite

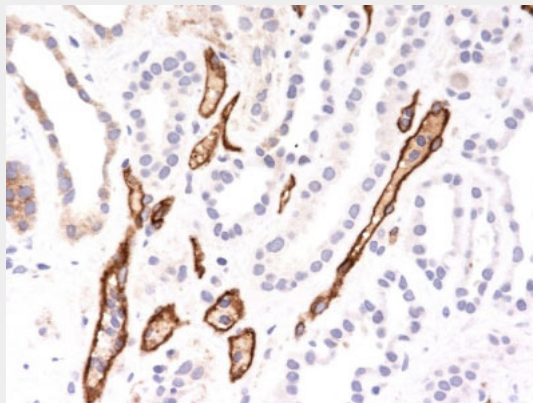
**Tissue Location**

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.

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide - 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](#)

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide - Images**

Formalin-fixed, paraffin-embedded human Kidney Transplant stained with Complement 4d Monoclonal Antibody (SPM545).

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide - Background**

This MAb is specific to Complement 4d (C4d) and it reacts with the secreted as well as cell-bound C4d. C4d is a degradation product of the activated complement factor C4b. Complement 4b is typically activated by binding of Abs to specific target molecules. Following activation and degradation of the C4 molecule, thio-ester groups are exposed, which allow transient, covalent binding of the degradation product Complement 4d to endothelial cell surfaces and extracellular

matrix components of vascular basement membranes near the sites of C4 activation. The presence of C4d in peritubular capillaries is a key indicator for acute humoral (i.e. antibody-mediated) rejection of kidney, heart, pancreas and lung allografts. As an established marker of antibody-mediated acute renal allograft rejection and its proclivity for endothelium, this component can be detected in peritubular capillaries in chronic renal allograft rejection as well as hyperacute rejection, acute vascular rejection, acute cellular rejection, and borderline rejection. It has been shown to be a significant predictor of transplant kidney graft survival. Anti-C4d, combined with anti-C3d, can be utilized as a tool for diagnosis of allograft rejection that may warrant a prompt and aggressive anti-rejection treatment.

**Complement 4d (C4d) (Acute Humoral Rejection Marker) Antibody - With BSA and Azide - References**

Collins AB et. al. J Am Soc Nephrol. 1999;10(10):2208-14. | Racusen LC et. al. Am J Transplant. 2003;3(6):708-14. | Sacks SH et. al. Curr Opin Nephrol Hypertens. 2002;11(6):627-8