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

Mouse Monoclonal Antibody [Clone C4D205]
Catalog # AH12467

Specification

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

Application	**,3,10,**
Primary Accession	P0C0L4
Other Accession	720, 721, 534847, 720022, P0C0L5
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse / IgG1**
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

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 Cytomety
- Cell Culture

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

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.ĀC4d 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