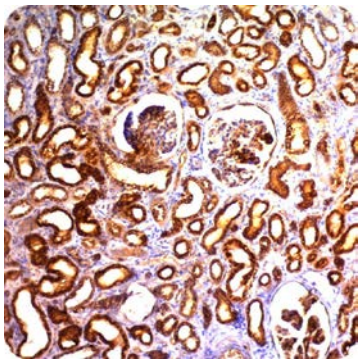
Complement 4d (C4d) (Acute Humoral Rejection Marker): Clone C4D204 (Concentrate)

Description:

Species:	Mouse
Immunogen:	Recombinant human Complement 4d protein
Clone:	C4D204
Isotype:	IgG1, kappa
Entrez Gene ID:	720 & 721 (Human)
Hu Chromosome Loc.:	6p21.3
Synonyms:	Acidic Complement C4; Basic C4; C4; C4-1; C4a Anaphylatoxin; C4A; C4A2; C4A3; C4A4; C4A6; C4b; C4B1; C4B12; C4d fragment; C4F; C4S; Complement C4 Gamma Chain; Complement Component 4A; Complement Component 4B
Mol. Weight of Antigen:	192kDa (predicted)
Format:	200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Specificity:	This MAb is specific to Complement 4d (C4d) and it reacts with the secreted as well as cell-bound C4d.
Background:	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.
Species Reactivity:	Human. Others not known.
Positive Control:	Rejected Renal Transplant Tissue
Cellular Localization:	Intracytoplasmic vacuoles of endothelial cells and Secreted
Titer/ Working Dilution:	Immunohistology (Frozen and Formalin-fixed): 1:200-1:400 Immunofluorescence: 1:50-1:100
Microbiological State:	This product is not sterile.

Uses/Limitations:

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy. Do not use past expiration date.
Non-Sterile.



Formalin-fixed, paraffin-embedded human transplant rejected kidney (10X) stained with C4d; Clone C4D204.

Procedure: Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with EDTA-based antigen retrieval, pH 8.0. We suggest an antibody incubation period of 30-60 minutes at room temperature or overnight at 2-8 C. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user. For maximum staining intensity, we recommend using AviBond Ultra for detection and DAB Clarity Ultra products for visualization.

Precautions: Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

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References:

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

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