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PRODUCT DATASHEET

Anti-Complement C3a/C3a(desArg)/C3 Antibody

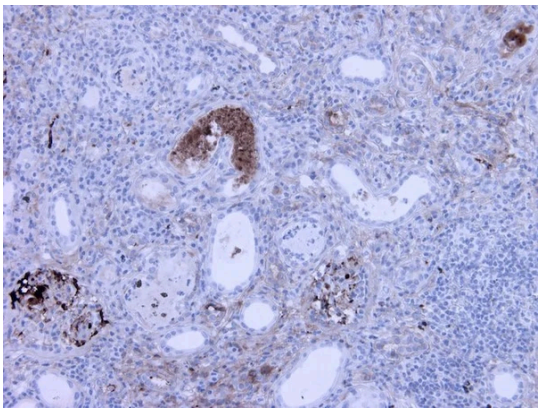
Product Details

Available Variants	100 uL (SKU:GAU 013-16-010) 400 uL (SKU:GAU 013-16-04) 1000 uL (SKU:GAU 013-16-1)
Conjugate	Unconjugated
Isotype	IgG1/k
Clone	K13/16-5.7
Gene Name	C3
Host Species	Mouse
Concentration	1 mg/mL ±15%
Format	Protein A or Protein G purified
Physical State	Liquid
Buffer	0.01 M phosphate buffer, pH 7.4, with 0.5 M NaCl and 15 mM sodium azide
Production Notes	BSA free
Applications	ELISA, IF, IHC, WB
Dilution Ranges	IHC: 1:150
Species Reactivity	Human
Immunogen	Human C3a
Specificity	GAU 013-16 is specific for human C3, C3a and C3a (desArg) (1) and does not cross-react with C4a or C5a. (2, 3) GAU 013-16 recognizes a different epitope on the 9 kDa C3a than GAU 017-01 (2, 3). No reaction is seen with a synthetic octapeptide representing the C3a C-terminal. (2)
Storage	2-8°C without exposure to light
UniProt ID	P01024 UniProt Summary: Precursor of non-enzymatic components of the classical, alternative, lectin and GZMK complement pathways, which consist in a

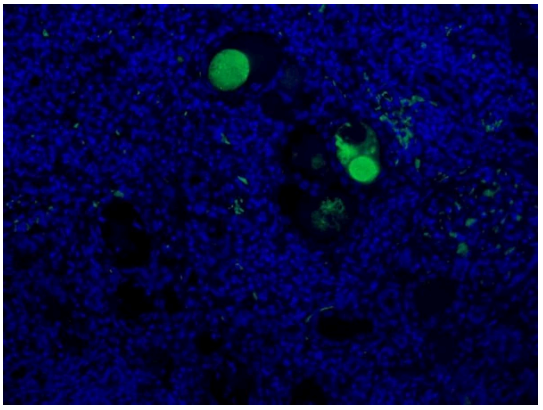
cascade of proteins that leads to phagocytosis and breakdown of pathogens and signaling that strengthens the adaptive immune system. {ECO:0000269|PubMed:12878586, ECO:0000269|PubMed:18204047, ECO:0000269|PubMed:28264884, ECO:0000269|PubMed:31507604, ECO:0000269|PubMed:39814882, ECO:0000269|PubMed:39914456, ECO:0000269|PubMed:624565, ECO:0000269|PubMed:6554279}.; [Complement C3b]: Non-enzymatic component of C5 convertase (PubMed:28264884, PubMed:31507604, PubMed:3653927, PubMed:3897448). Generated following cleavage by C3 convertase, it covalently attaches to the surface of pathogens, where it acts as an opsonin that marks the surface of antigens for removal (PubMed:28264884, PubMed:31507604, PubMed:3653927, PubMed:3897448, PubMed:833545, PubMed:8349625). Complement C3b binds covalently via its reactive thioester, to cell surface carbohydrates or immune aggregates (PubMed:6903192). Together with complement C4b, it then recruits the serine protease complement C2b to form the C5 convertase, which cleaves and activate C5, the next component of the complement pathways (PubMed:12878586, PubMed:18204047, PubMed:2387864). In the alternative complement pathway, recruits the serine protease CFB to form the C5 convertase that cleaves and activates C5 (PubMed:624565, PubMed:6554279). {ECO:0000269|PubMed:12878586, ECO:0000269|PubMed:18204047, ECO:0000269|PubMed:2387864, ECO:0000269|PubMed:28264884, ECO:0000269|PubMed:31507604, ECO:0000269|PubMed:3653927, ECO:0000269|PubMed:3897448, ECO:0000269|PubMed:624565, ECO:0000269|PubMed:6554279, ECO:0000269|PubMed:6903192, ECO:0000269|PubMed:833545, ECO:0000269|PubMed:8349625}.; [C3a anaphylatoxin]: Mediator of local inflammatory process released following cleavage by C3 convertase (PubMed:6968751, PubMed:37169960, PubMed:37852260). Acts by binding to its receptor, C3AR1, activating G protein-coupled receptor signaling, promoting the phosphorylation, ARRB2-mediated internalization and endocytosis of C3AR1 (PubMed:8702752, PubMed:37169960, PubMed:37852260). C3a anaphylatoxin stimulates the activation of immune cells such as mast cells and basophilic leukocytes to release inflammation agents, such as cytokines, chemokines and histamine, which promote inflammation development (PubMed:23383423). Also acts as potent chemoattractant for the migration of macrophages and neutrophils to the inflamed tissues, resulting in neutralization of the inflammatory triggers by multiple ways, such as phagocytosis and generation of reactive oxidants (PubMed:23383423, PubMed:342601, PubMed:5778786). {ECO:0000269|PubMed:342601, ECO:0000269|PubMed:37169960, ECO:0000269|PubMed:37852260, ECO:0000269|PubMed:5778786, ECO:0000269|PubMed:6968751, ECO:0000269|PubMed:8702752, ECO:0000303|PubMed:23383423}.; [Acylation stimulating protein]: Adipogenic hormone that stimulates triglyceride synthesis and glucose transport in adipocytes, regulating fat storage and playing a role in postprandial triglyceride clearance (PubMed:10432298, PubMed:15833747, PubMed:16333141, PubMed:19615750, PubMed:2909530, PubMed:8376604, PubMed:9059512). Appears to stimulate triglyceride synthesis via activation of the PLC, MAPK and

	AKT signaling pathways (PubMed:16333141). Acts by binding to its receptor, C5AR2, activating G protein-coupled receptor signaling, promoting the phosphorylation, ARRB2-mediated internalization and endocytosis of C5AR2 (PubMed:11773063, PubMed:12540846, PubMed:19615750). In contrast to C3a anaphylatoxin peptide, does not show pro-inflammatory activity (PubMed:37852260). {ECO:0000269|PubMed:10432298, ECO:0000269|PubMed:11773063, ECO:0000269|PubMed:12540846, ECO:0000269|PubMed:15833747, ECO:0000269|PubMed:16333141, ECO:0000269|PubMed:19615750, ECO:0000269|PubMed:2909530, ECO:0000269|PubMed:37852260, ECO:0000269|PubMed:8376604, ECO:0000269|PubMed:9059512}.; [C3-beta-c]: Acts as a chemoattractant for neutrophils in chronic inflammation. {ECO:0000250|UniProtKB:P01026}.
Country of Origin	United States
Shipping	Shipped on ice packs
Expiration	24 months from date of receipt
Usage Statement	These antibodies are to be used as research laboratory reagents and are not for use as diagnostic or therapeutic reagents in humans.
NCBI Gene ID	718

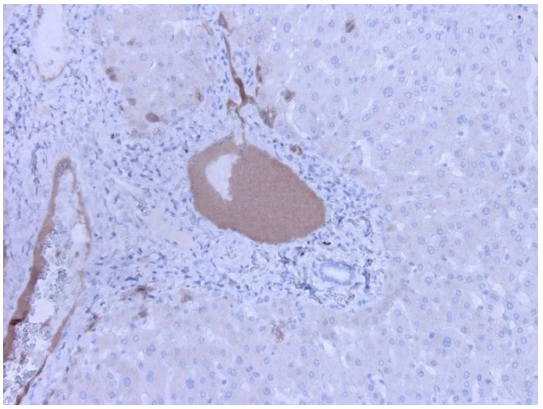
Product Images



Immunohistochemistry detection of Complement C3a/C3a/(desArg)/C3 in human kidney tissue using Anti-Complement C3a/C3a(desArg)/C3 Antibody (Cat.GAU 013-16-010). Tissue was mounted and pariffin fixed. Heat induced antigen retrieval was performed using citrate buffer, heated, and then blocked. After washing, the primary antibody (Cat.GAU 013-16-010) was incubated with the sample at a dilution of 1:150. Strong staining of veins of nephritis kidney was seen.



Immunofluorescent staining of Complement C3a in plasma of nephritis human kidney using Anti-Complement C3a/C3a(desArg)/C3 Antibody (Cat.GAU 013-16-010). Cells where fixed with formaldehyde and permeabilized prior to staining Primary antibody (GAU 013-16-010) was incubated with the cells at a dilution of 1:75.



Immunohistochemistry detection of Complement C3a/C3a/(desArg)/C3 in human liver tissue using Anti-Complement C3a/C3a(desArg)/C3 Antibody (Cat.GAU 013-16-010). Tissue was mounted and pariffin fixed. Heat induced antigen retrieval was performed using citrate buffer, heated, and then blocked. After washing, the primary antibody (Cat.GAU 013-16-010) was incubated with the sample at a dilution of 1:150. Strong staining of plasma of veins in liver tissue.