abcam

ab288539

Anti-Cathelicidin/CLP antibody [B-T37] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human CAMP. Database link P49913
Carrier free	Yes
Clone number	B-T37
Purification technique	Affinity purification Protein A
Light chain type	kappa
Purification notes	Purified from cell culture supernatant

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/2 - 1/256

Notes	-

Target data

See full target information CAMP

Function	Antimicrobial protein that is an integral component of the innate immune system (PubMed:14978112, PubMed:16637646, PubMed:18818205, PubMed:22879591, PubMed:9736536). Binds to bacterial lipopolysaccharides (LPS) (PubMed:16637646, PubMed:18818205). Acts via neutrophil N-formyl peptide receptors to enhance the release of CXCL2 (PubMed:22879591). Postsecretory processing generates multiple cathelicidin antimicrobial peptides with various lengths which act as a topical antimicrobial defense in sweat on skin (PubMed:14978112). The unprocessed precursor form, cathelicidin antimicrobial peptide, inhibits the growth of Gram-negative E.coli and E.aerogenes with efficiencies comparable to that of the mature peptide LL-37 (in vitro) (PubMed:9736536). Antibacterial peptide LL-37. Antimicrobial peptide that is an integral component of the innate immune system (PubMed:10417311, PubMed:15778390, PubMed:16637646, PubMed:18818205, PubMed:22879591, PubMed:32753597, PubMed:33060695, PubMed:34708076, PubMed:8681941, PubMed:9736536). Binds to bacterial lipopolysaccharides (LPS) (PubMed:10417311, PubMed:16637646, PubMed:18818205, PubMed:33060695, PubMed:9736536). Causes membrane permeabilization by forming transmembrane pores (in vitro) (PubMed:22879591, PubMed:32753597, PubMed:33060695). Causes lysis of E.coli (PubMed:10417311). Exhibits antimicrobial activity against Gram-negative bacteria such as P.aeruginosa, S.typhimurium, E.aerogenes, E.coli and P.syringae, Gram-positive bacteria such as L.monocytogenes, S.epidermidis, S.pyogenes and S.aureus, as well as vancomycin-resistant enterococci (in vitro) (PubMed:10417311, PubMed:32753597, PubMed:8681941, PubMed:9736536). Exhibits antimicrobial activity against methicillin-resistant S.aureus, P.mirabilis, and C.albicans in low-salt media, but not in media containing 100 mM NaCl (in vitro) (PubMed:9736536). Forms chiral supramolecular assemblies with quinolone signal (PQS) molecules of P.aeruginosa, which may lead to interference of bacterial quorum signaling and perturbance of bacterial biofilm formation (PubMed:34708076). May form supramolecular fiber-like assemblies on bacterial membranes (PubMed:29133814). Induces cytokine and chemokine production as well as TNF/TNFA and CSF2/GMCSF production in normal human keratinocytes (PubMed:15778390). Exhibits hemolytic activity against red blood cells (PubMed:10417311). Antibacterial peptide FALL-39. Exhibits antimicrobial activity against E.coli and B.megaterium (in vitro). Antibacterial peptide KR-20. Acts synergistically with peptides KS-30 and KR-31, killing bacteria such as S.aureus, E.coli and C.albicans at lower concentrations when present together, and maintains activity at increased salt condition (PubMed:14978112). Does not have the ability to stimulate CXCL8/IL8 release from keratinocytes (PubMed:14978112). Antibacterial peptide LL-23. Poorly active (MIC > 150 uM) against E.coli strain K12 (PubMed:14978112). Is able to induce the pro-inflammatory cytokine TNF/TNFA or the chemokine CCL2/MCP1 (PubMed:14978112). Antibacterial peptide LL-29. Moderately antibacterial. Antibacterial peptide KS-30. Moderately antibacterial (PubMed:14978112). Acts synergistically with peptides KR-20 and KR-31, killing bacteria such as S.aureus, E.coli and C.albicans at lower concentrations when present together, and maintain activity at increased salt condition (PubMed:14978112). Does not have the ability to stimulate CXCL8/IL8 release from keratinocytes (PubMed:14978112).

Antibacterial peptide RK-31. Acts synergistically with peptides KS-30 and KR-31, killing bacteria such as S.aureus, E.coli and C.albicans at lower concentrations when present together, and maintain activity at increased salt condition (PubMed:14978112). Does not have the ability to stimulate CXCL8/IL8 release from keratinocytes (PubMed:14978112). Antibacterial peptide FF-33. Inhibits the growth of E.coli and B.megaterium and exhibits hemolytic activity against human red blood cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

Hybridoma: Myeloma X63/AG.8653 x Balb/c node cells.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cathelicidin also known as LL-37 peptide is an antimicrobial peptide with a mass of around 18 kDa. It plays an important role in the innate immune system by disrupting microbial membranes. LL-37 is expressed in various tissues including skin mucosal surfaces and certain immune cells. These peptides protect the host from infection by directly killing bacteria viruses and fungi and by modulating immune responses.
Biological function summary	Peptides like Cathelicidin are essential for host defense mechanisms contributing to cell signaling and pathogen clearance. LL-37 does not function within a complex but acts independently to influence immune cell chemotaxis. It promotes wound healing angiogenesis and tissue repair thereby ensuring rapid response to injury or infection.
Pathways	Cathelicidin interacts within inflammatory and wound healing pathways. It is involved in the NF-kB signaling pathway which regulates immune response and is linked to TLR (Toll-like receptor) pathways impacting cytokine production and further immune modulation. Proteins such as defensins share similar pathways indicating their collective influence in antimicrobial defense and tissue repair.

Associated diseases and disorders	Peptides like Cathelicidin are associated with conditions like psoriasis and atopic dermatitis. Overexpression or dysregulation of LL-37 can exacerbate inflammation in these autoimmune skin disorders. Related to these diseases proteins such as interleukins (IL-1 and IL-6) are often co-expressed or influenced by Cathelicidin levels indicating their intertwined role in skin homeostasis and immune responses.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

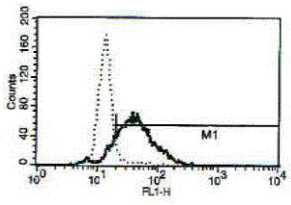
We do not recommend this combination. It is not covered by our product promise.

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Flow Cytometry - Anti-Cathelicidin/CLP antibody [B-T37] - BSA and Azide free (ab288539)

Cathelicidin/CLP Flow Cytometry staining using mouse Anti-Cathelicidin/CLP antibody

Flow cytometry overlay histogram of human granulocytes labelling Cathelicidin/CLP with ab288539 at 1/2 – 1/256 dilution (black, right) compared with an isotype control (grey, left). GAM-FITC at 1/800 dilution was used as the secondary antibody.

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