Human β-Defensin 3 Alexa Fluor® 350-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4435U
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human β-Defensin 3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human β-Defensin 2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human β-Defensin 3 Gly23-Lys67 Accession # P81534
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

β-Defensin 3, also known as BD3 and DEFB-3, is a membrane-active cationic peptide that functions in inflammation and innate immune responses. There are at least 30 β-Defensins which are distinguished from α-Defensins by the connectivity pattern of their three intramolecular disulfide bonds (1). The 45 amino acid (aa) mature human BD3 shares 38% and 33% aa sequence identity with mouse and rat BD3, respectively (2, 3). It shares 18%-36% aa sequence identity with other human β-Defensins. BD3 is widely expressed among epithelial tissues, notably by keratinocytes and airway epithelial cells. It is up-regulated in response to proinflammatory cytokines, microbial and viral infections, and at the edges of skin wounds (2, 4-6). BD3 induction in osteoarthritis chondrocytes promotes MMP1 and 13 production and inhibits TIMP1 and 2 expression (7). *In vivo* control of BD3 activity is accomplished in part through cleavage by cathepsins B, L, and S (8). BD3 displays strain specific microbicidal activity toward a broad spectrum of bacteria and yeast (2, 9). BD3 also induces monocyte migration, mast cell activation, and a mast cell-dependent increase in vascular permeability (4, 10). Disruption of the intramolecular disulfide bond pattern in BD3 abrogates its monocyte chemoattractant properties but not its antimicrobial properties (11, 12). BD3 inhibits viral infectivity by interacting directly with HIV-1 plus its coreceptor CXCR4 (5, 13), and with HSV glycoprotein B plus its receptor heparan sulfate (14), and by forming a protective coating on the surface of influenza virus target cells (15).

PRODUCT SPECIFIC NOTICES

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