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Anti-Defensin alpha 1 Antibody

Catalog # AP51161

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P59665
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	10201

Additional Information

Gene ID	1667;728358
Other Names	DEF1; DEFA2; MRS; Neutrophil defensin 1; Defensin, alpha 1; HNP-1; HP-1; HP1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Defensin alpha 1. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	DEFA1
Synonyms	DEF1, DEFA2, MRS
Function	Effector molecule of the innate immune system that acts via antibiotic-like properties against a broad array of infectious agents including bacteria, fungi, and viruses or by promoting the activation and maturation of some APCs (PubMed:15616305, PubMed:17142766, PubMed:20220136, PubMed:24236072). Interacts with the essential precursor of cell wall synthesis lipid II to inhibit bacterial cell wall synthesis (PubMed:20214904). Inhibits adenovirus infection via inhibition of viral disassembly at the vertex region, thereby restricting the release of internal capsid protein pVI, which is required for endosomal membrane penetration during cell entry (PubMed:18191790). In addition, interaction with adenovirus capsid leads to the redirection of viral particles to TLR4 thereby promoting a NLRP3-mediated inflammasome response and interleukin 1-beta (IL-1beta) release (PubMed:35080426). Induces the production of proinflammatory cytokines

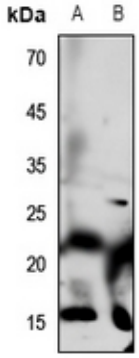
including type I interferon (IFN) in plasmacytoid dendritic cells (pDCs) by triggering the degradation of NFKBIA and nuclear translocation of IRF1, both of which are required for activation of pDCs (PubMed:27031443).

Cellular Location Secreted.

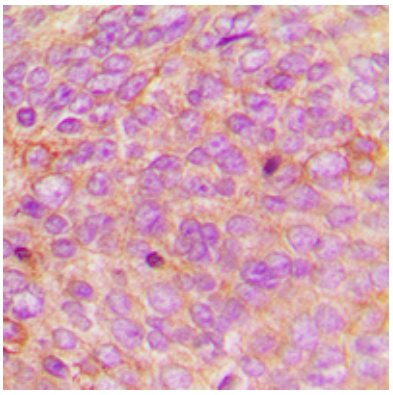
References

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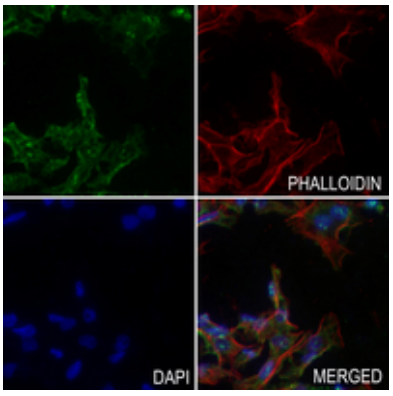
Images



Western blot analysis of Defensin alpha 1 expression in mouse spleen (A), rat spleen (B) whole cell lysates. (Predicted band size: 10 kD; Observed band size: 15 kD)



Immunohistochemical analysis of Defensin alpha 1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Defensin alpha 1 staining in HuH7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.