



# PADI4 Rabbit mAb

<b>Catalog No</b>	YP-rAb-16909
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human,Mouse,Rat
<b>Applications</b>	WB,IHC,IF,ELISA
<b>Gene Name</b>	PAD4 PADI5 PDI5
<b>Protein Name</b>	Protein-arginine deiminase type-4
<b>Purification Process</b>	Protein A
<b>Specificity</b>	Endogenous
<b>Formulation</b>	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
<b>Source</b>	Monoclonal, Rabbit,IgG
<b>Dilution</b>	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
<b>Concentration</b>	0.5 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-15° C to -25° C/1 year(Do not lower than -25° C)
<b>Synonyms</b>	PADI4 ; PAD4 ; PADI5 ; PDI5 ; HL-60 PAD ; Peptidylarginine deiminase IV ; Protein-arginine deiminase type IV ;
<b>Observed Band</b>	80kD
<b>Calculated Molecular Weight</b>	74kD
<b>Cell Pathway</b>	Cytoplasm . Nucleus . Cytoplasmic granule . Cytoplasmic granules of eosinophils and neutrophils. .
<b>Tissue Specificity</b>	Expressed in eosinophils and neutrophils, not expressed in peripheral monocytes or lymphocytes.
<b>Function</b>	Catalyzes the citrullination/deimination of arginine residues of proteins such as histones, thereby playing a key role in histone code and regulation of stem cell maintenance (PubMed:15339660, PubMed:15345777, PubMed:16567635, PubMed:21245532). Citrullinates histone H1 at 'Arg-54' (to form H1R54ci), histone H3 at 'Arg-2', 'Arg-8', 'Arg-17' and/or 'Arg-26' (to form H3R2ci, H3R8ci, H3R17ci, H3R26ci, respectively) and histone H4 at 'Arg-3' (to form H4R3ci) (PubMed:15339660, PubMed:15345777, PubMed:16567635, PubMed:21245532). Acts as a key regulator of stem cell maintenance by mediating citrullination of histone H1: citrullination of 'Arg-54' of histone H1 (H1R54ci) results in H1 displacement from chromatin and global chromatin decondensation, thereby promoting pluripotency and stem cell maintenance (PubMed:15339660, PubMed:15345777, PubMed:16567635,

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PubMed:21245532). Promotes profound chromatin decondensation during the innate immune response to infection in neutrophils by mediating formation of H1R54ci (PubMed:18209087). Required for the formation of neutrophil extracellular traps (NETs); NETs are mainly composed of DNA fibers and are released by neutrophils to bind pathogens during inflammation (By similarity). Citrullination of histone H3 prevents their methylation by CARM1 and HRMT1L2/PRMT1 and represses transcription (PubMed:15345777). Citrullinates EP300/P300 at 'Arg-2142', which favors its interaction with NCOA2/GRIP1 (PubMed:15731352).

### Background

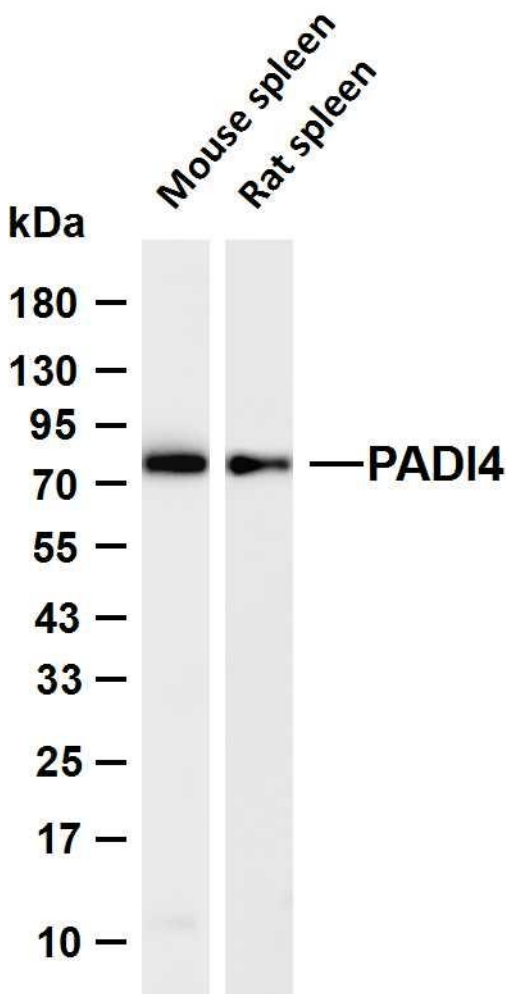
This gene is a member of a gene family which encodes enzymes responsible for the conversion of arginine residues to citrulline residues. This gene may play a role in granulocyte and macrophage development leading to inflammation and immune response. [provided by RefSeq, Jul 2008]

### matters needing attention

Avoid repeated freezing and thawing!

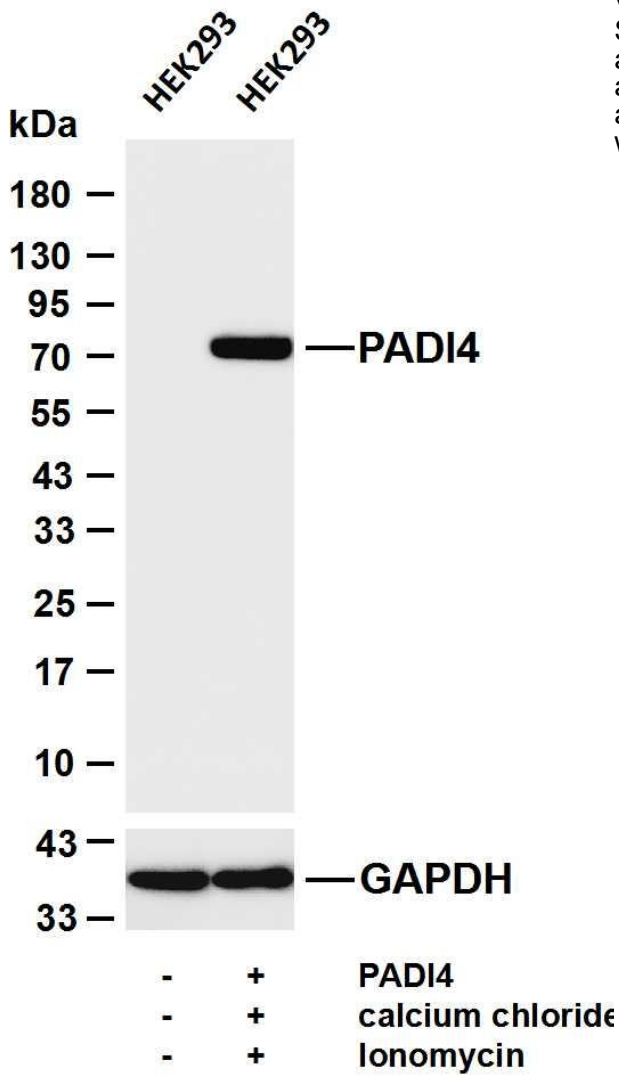
### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PADI4 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: Mouse spleen Lane 2: Rat spleen Predicted band size: 74kDa Observed band size: 80kDa





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PADI4 antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HEK293 Lane 2: HEK293 transfected with PADI4 treated with 10 mM calcium chloride and 10  $\mu$ M Ionomycin for 4 hours

