

Recombinant Human PADI4 Protein (A2-P663), Tag Free

Cat. No. PADI4-0218H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GG-PADI4(A2-P663 end) Protein was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	A2-P663
Description	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. 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). 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. Promotes profound chromatin decondensation during the innate immune response to infection in neutrophils by mediating formation of H1R54ci. 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. Citrullination of histone H3 prevents their methylation by CARM1 and HRMT1L2/PRMT1 and represses transcription. Citrullinates EP300/P300 at 'Arg-2142', which favors its interaction with NCOA2/GRIP1.

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Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	PADI4 peptidyl arginine deiminase, type IV [Homo sapiens (human)]
Official Symbol	PADI4
Synonyms	PADI4; peptidyl arginine deiminase, type IV; PADI5, peptidyl arginine deiminase, type V; protein-arginine deiminase type-4; PAD; PDI4; PDI5; HL-60 PAD; PADI-H protein; protein-arginine deiminase type IV; peptidyl arginine deiminase, type V; PAD4; PADI5;
Gene ID	23569
mRNA Refseq	NM_012387

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Protein Refseq	NP_036519
MIM	605347
UniProt ID	Q9UM07

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