

Recombinant Mouse Padi4 Protein, Myc/DDK-tagged

Cat. No. Padi4-4653M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length peptidyl arginine deiminase, type IV (Padi4), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
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. 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.
Molecular Mass	74.9 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining

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Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Padi4 peptidyl arginine deiminase, type IV [<i>Mus musculus</i> (house mouse)]
Official Symbol	Padi4
Synonyms	PADI4; peptidyl arginine deiminase, type IV; protein-arginine deiminase type-4; PAD type IV; peptidylarginine deiminase IV; protein-arginine deiminase type IV; Pdi4
Gene ID	18602
mRNA Refseq	NM_011061
Protein Refseq	NP_035191
UniProt ID	Q9Z183

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