

## Product datasheet for TP516758

### Padi4 (NM\_011061) Mouse Recombinant Protein

#### Product data:

|                                       |                                                                                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Type:                         | Recombinant Proteins                                                                                                                              |
| Description:                          | Purified recombinant protein of Mouse peptidyl arginine deiminase, type IV (Padi4), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug |
| Species:                              | Mouse                                                                                                                                             |
| Expression Host:                      | HEK293T                                                                                                                                           |
| Expression cDNA Clone or AA Sequence: | >MR216758 representing NM_011061<br>Red=Cloning site Green=Tags(s)                                                                                |

MAQGAVIHVAPEQPTHAVCVVGTATPLDVRGSAPKGYTTFGITASPGVIVDVIHGPPVKKSTMGASKWPL  
DPELEVTLQVKAASSRTDDEKVRVSYGPKTSPVQALIYITGVLSLSADVTRTRGRVKPAQAGKDQSTWT  
WGPGGRGAILLVNCDKEDPQASGMDFEDDKILDNKLQDMSPMTLSTKTPKDFFEKYQLVLEVPKAKMNR  
VRVFRATRGLKPSRYKVALGPQQFSYCLELPGGQHSTDFYVEGLAFPDADFKGLIPLTISLLDKSNPELP  
EALVFQDSVTRVAPWIMTPNTQPPQEVYVCRVSDNEDFLKSLATLTKKAKCKLTVCPPEENIDDQWMQD  
EMEIGYIQAPHKTLPVVFDSPDRGLKDFPVKRVMGPNFGYVTRKLYMSELTGLDAFGNLEVSPVTVRG  
KEYPLGRILIGNSGYSSSESMDMHQALQDFLSAQVQAPVRLFSDWLVFVGHVDFLSFVPARDKQGFRL  
LSSPRACYQLFQELQSQGHGEATLFEGLKRKRQTINEILSNKKLRDQNAYVESCIDWNRAVLKRELGLAE  
GDIIDIPQLFKLAGNSRGNSKAQAFFPNMVNMLVLGKYLGIPKPFPGPIIDGHCCLEEEVRSHPLEPLGLHC  
TFINDFYTYHVYNGEVHCGTNRKPKFTFKWWHMVP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

|                |                                                                                                                                                      |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tag:           | C-MYC/DDK                                                                                                                                            |
| Predicted MW:  | 74.9 kDa                                                                                                                                             |
| Concentration: | >0.05 µg/µL as determined by microplate BCA method                                                                                                   |
| Purity:        | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                          |
| Buffer:        | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol                                                                                                 |
| Note:          | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process. |
| Storage:       | Store at -80°C after receiving vials.                                                                                                                |
| Stability:     | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.        |



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RefSeq: [NP\\_035191](#)

Locus ID: 18602

UniProt ID: [Q9Z183](#)

RefSeq Size: 2640

Cytogenetics: 4 72.34 cM

RefSeq ORF: 1998

Synonyms: Pad4; Pdi4

**Summary:** 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.[UniProtKB/Swiss-Prot Function]