

## PAD4 Protein

Full length recombinant human protein expressed in Sf9 cells

**Catalog # P312-30DG**

Lot # A1242-2

### Product Description

Recombinant full-length human PAD4 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The gene accession number is [BC025718](#).

### Gene Aliases

PADI4; PAD; PDI4; PDI5

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.

### Storage and Stability

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

### Scientific Background

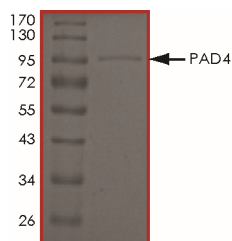
PAD4 is a member of the peptidyl arginine deiminase family of enzymes, which catalyze the post-translational deimination of proteins by converting arginine residues into citrullines in the presence of calcium ions (1). PAD4 is essential for antibacterial innate immunity mediated by neutrophil extracellular traps (NETs) (2). PAD4 play a role in granulocyte and macrophage development leading to inflammation and immune response. PAD4 also mediates the gene expression by regulating arginine methylation and citrullination in histones(3).

### References

1. Nakashima, K. et.al: Molecular characterization of peptidylarginine deiminase in HL-60 cells induced by retinoic acid and 1-alpha,25-dihydroxyvitamin D(3). J. Biol. Chem. 274: 27786-27792, 1999.
2. Li, P.et.al: PAD4 is essential for antibacterial innate immunity mediated by neutrophil extracellular traps. J. Exp. Med. 207: 1853-1862, 2010.
3. Wang, Y. et.al: Human PAD4 regulates histone arginine methylation levels via demethyliminination. Science 306: 279-283, 2004.

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### Purity



The purity of PAD4 was determined to be **>95%** by densitometry. Approx. MW **96 kDa**.

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|                    |   |
|--------------------|---|
| Catalog #          | P312-30DG   |
| Specific Lot #     | A1242-2   |
| Purity             | >95%  |
| Concentration      | 0.1 µg/µl   |
| Stability          | 1yr at -70°C from date of shipment  |
| Storage & Shipping | Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice. |