



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

PRODUCT INFORMATION



PAD1 (human, recombinant)

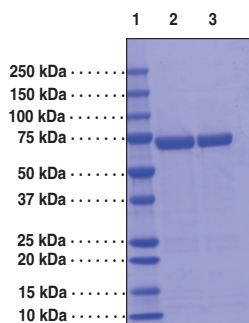
Item No. 10784

Overview and Properties

Synonyms: PADI1, PDI1, Peptidylarginine Deiminase 1, Protein Arginine Deiminase 1
Source: Recombinant N-terminal His-tagged protein expressed in *E. coli*
Uniprot No.: Q9ULC6
Amino Acids: 2-663 (full length)
Molecular Weight: 76.4 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability: ≥2 years
Purity: ≥95% estimated by SDS-PAGE
Supplied in: 50 mM Tris-HCl, pH 8.0, with 150 mM sodium chloride, 1 mM DTT, and 20% glycerol
Protein Concentration: *batch specific* mg/ml
Activity: *batch specific* U/ml
Specific Activity: *batch specific* U/mg
Unit Definition: One unit is defined as the amount of enzyme required to produce 1 nmol of NH_4^+ per minute at 37°C in 50 mM HEPES, pH 7.7, containing 10 mM calcium chloride, 5 mM DTT, and 2 mM N-Benzoyl-L-Arginine Ethyl Ester (BAEE).

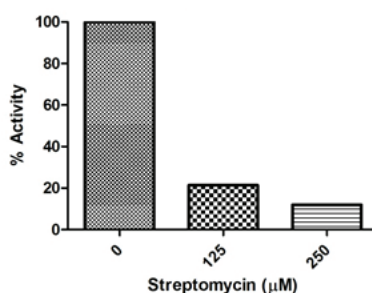
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images

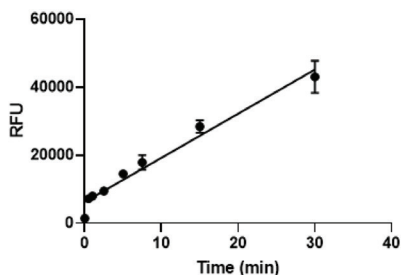


Lane 1: MW Markers
Lane 2: PADI1 (2 µg)
Lane 3: PADI1 (4 µg)

Representative gel image shown; actual purity may vary between each batch.



Inhibition of PADI1 by Streptomycin



Activity of PADI1. PADI1 activity was determined using Cayman's PADI1 Inhibitor Screening Assay Kit (Item No. 701450) with 2.6 µg PADI1 and 2 mM BAEE substrate.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 08/30/2021

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Protein Arginine Deiminases (PADs) are guanidino-modifying enzymes belonging to the amidinotransferase superfamily and are designated PAD1-4 and PAD6. PADs are calcium-dependent enzymes that catalyze the post-translational modification of target proteins by converting arginine to citrulline.^{1,2} The various PADs exhibit tissue specific expression and different subcellular localization.³ PAD1 is expressed in uterus and throughout the epidermis. PAD1 and PAD3 are speculated to mediate deimination of epidermal filaggrin (filament aggregation protein) and keratins, proteins involved in maintaining skin hydration.⁴

References

1. Vossenaar, E.R., Zendman, A.J., van Venrooij, W.J., *et al.* PAD, a growing family of citrullinating enzymes: Genes, features and involvement in disease. *Bioassays* **25(11)**, 1106-18 (2003).
2. Shirai, H., Blundell, T.L., and Mizuguchi, K. A novel superfamily of enzymes that catalyze the modification of guanidino groups. *Trends Biochem. Sci.* **26(8)**, 465-468 (2001).
3. Méchin, M.C., Enji, M., Nachat, R., *et al.* The peptidylarginine deiminases expressed in human epidermis differ in their substrate specificities and subcellular locations. *Cell. Mol. Life Sci.* **62(17)**, 1984-95 (2005).
4. Nachat, R., Méchin, M.C., Takahara, H., *et al.* Peptidylarginine deiminase isoforms 1-3 are expressed in the epidermis and involved in the deimination of K1 and filaggrin. *J. Invest. Dermatol.* **124(2)**, 384-93 (2005).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM