Datasheet for ABIN7554850

PAD4 Protein (AA 1-663) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	PAD4 (PADI4)
Protein Characteristics:	AA 1-663
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PAD4 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant PADI4 Protein expressed in mammalian cells.
Sequence:	MAQGTLIRVT PEQPTHAVCV LGTLTQLDIC SSAPEDCTSF SINASPGVVV DIAHGPPAKK KSTGSSTWPL DPGVEVTLTM KVASGSTGDQ KVQISYYGPK TPPVKALLYL TGVEISLCAD ITRTGKVKPT RAVKDQRTWT WGPCGQGAIL LVNCDRDNLE SSAMDCEDDE VLDSEDLQDM SLMTLSTKTP KDFFTNHTLV LHVARSEMDK VRVFQATRGK LSSKCSVVLG PKWPSHYLMV PGGKHNMDFY VEALAFPDTD FPGLITLTIS LLDTSNLELP EAVVFQDSVV FRVAPWIMTP NTQPPQEVYA CSIFENEDFL KSVTTLAMKA KCKLTICPEE ENMDDQWMQD EMEIGYIQAP HKTLPVVFDS PRNRGLKEFP IKRVMGPDFG YVTRGPQTGG ISGLDSFGNL EVSPPVTVRG KEYPLGRILF GDSCYPSNDS RQMHQALQDF LSAQQVQAPV KLYSDWLSVG HVDEFLSFVP APDRKGFRLL LASPRSCYKL FQEQQNEGHG EALLFEGIKK KKQQKIKNIL SNKTLREHNS FVERCIDWNR ELLKRELGLA ESDIIDIPQL FKLKEFSKAE AFFPNMVNML VLGKHLGIPK PFGPVINGRC CLEEKVCSLL EPLGLQCTFI NDFFTYHIRH GEVHCGTNVR RKPFSFKWWN MVP **Sequence without tag. The proposed Purification-Tag is based on experiences with the**

Product Details

	expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	PAD4 (PADI4)
Alternative Name:	PADI4 (PADI4 Products)
Background:	Protein-arginine deiminase type-4 (EC 3.5.3.15) (HL-60 PAD) (Peptidylarginine deiminase IV) (Protein-arginine deiminase type IV),FUNCTION: 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 (PubMed:15339660, PubMed:15345777, PubMed:16567635, PubMed:21245532). 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) (PubMed:15339660, PubMed:15345777, PubMed:16567635, PubMed:21245532). Acts as a key regulator of stem cell maintenance by mediating citrullination of histone H1: citrullination of 'Arg-54' of histone H1

Target Details

	(H1R54ci) results in H1 displacement from chromatin and global chromatin decondensation, thereby promoting pluripotency and stem cell maintenance (PubMed:15339660, PubMed:15345777, PubMed:16567635, PubMed:21245532). Promotes profound chromatin decondensation during the innate immune response to infection in neutrophils by mediating formation of H1R54ci (PubMed:18209087). 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 (By similarity). Citrullination of histone H3 prevents their methylation by CARM1 and HRMT1L2/PRMT1 and represses transcription (PubMed:15345777). Citrullinates EP300/P300 at 'Arg-2142', which favors its interaction with NCOA2/GRIP1 (PubMed:15731352). {ECO:0000250|UniProtKB:Q9Z183, ECO:0000269|PubMed:15339660, ECO:0000269|PubMed:15345777, ECO:0000269|PubMed:15731352, ECO:0000269|PubMed:16567635, ECO:0000269|PubMed:18209087, ECO:0000269|PubMed:21245532}.
Molecular Weight:	74.1 kDa
UniProt:	Q9UM07

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months