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PADI6 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18363a

Product Information

Application	WB, E
Primary Accession	Q6TGC4
Other Accession	NP_997304.3
Reactivity	Human, Mouse
Predicted	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37739
Calculated MW	77727
Antigen Region	196-223

Additional Information

Gene ID	353238
Other Names	Protein-arginine deiminase type-6, Peptidyl arginine deiminase-like protein, Peptidylarginine deiminase VI, hPADVI, Protein-arginine deiminase type VI, PADI6
Target/Specificity	This PADI6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 196-223 amino acids from the N-terminal region of human PADI6.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PADI6 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PADI6 {ECO:0000303|PubMed:15087120, ECO:0000312|HGNC:HGNC:20449}
Function	Structural constituent of cytoplasmic lattices, which plays a key role in early

	embryonic development (PubMed:37922900, PubMed:41772195). Cytoplasmic lattices consist in fibrous structures found in the cytoplasm of oocytes and preimplantation embryos: they are required to store maternal proteins critical for embryonic development, such as ribosomal proteins, cytoskeletal tubulins and proteins controlling epigenetic reprogramming of the preimplantation embryo, in a poised but restrained state, regulating their availability for early embryonic development (PubMed:37922900, PubMed:41772195). Cytoplasmic lattices also tightly control ubiquitination during the oocyte-to- embryo transition by trapping E3 ubiquitin-protein ligase UHRF1 in a compact autoinhibited conformation and maintaining SCF ubiquitin ligase complexes inactive (PubMed:41772195). PADI6 oligomers acts as an essential structural scaffolding element of cytoplasmic lattices (By similarity). In contrast to other members of the family, does not show protein-arginine deiminase activity due to its inability to bind Ca(2+) (PubMed:38656308, PubMed:39286527).
Cellular Location	Cytoplasm. Cytoplasmic vesicle, secretory vesicle, Cortical granule {ECO:0000250|UniProtKB:Q8K3V4}. Nucleus {ECO:0000250|UniProtKB:Q8K3V4}. Note=Core component of cytoplasmic lattices in oocytes (PubMed:37922900). Also nuclear (By similarity) {ECO:0000250|UniProtKB:Q8K3V4, ECO:0000269|PubMed:37922900}
Tissue Location	Highly expressed in oocytes and weakly expressed in other somatic tissues.

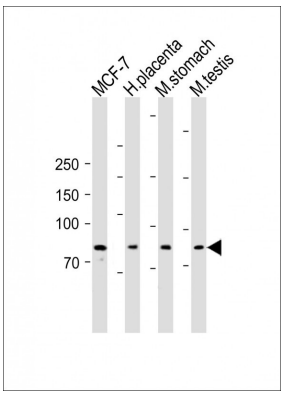
Background

Peptidylarginine deiminases (PADs, EC 3.5.3.15), including PADI6, make up a family of posttranslational protein modification enzymes that convert arginine residues to citrulline residues in the presence of calcium ions.

References

Stacey, S.N., et al. Nat. Genet. 40(11):1313-1318(2008)
Chavanas, S., et al. Gene 330, 19-27 (2004) :
Zhang, J., et al. Acta Biochim. Pol. 51(4):1051-1058(2004)
Vossenaar, E.R., et al. Bioessays 25(11):1106-1118(2003)

Images



All lanes: Anti-PADI6 Antibody (N-term) at 1:1000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: Huamn placenta lysate Lane 3: Mouse stomach lysate Lane 4: Mouse testis lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 78 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.