



FAM111A Rabbit mAb

Catalog No	YP-rAb-17693
Isotype	IgG
Reactivity	Human
Applications	WB,IHC,IF,ICC
Gene Name	FAM111A;KIAA1895
Protein Name	Serine protease FAM111A
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	WB 1:1000-5000; IHC 1:100-300; ICC/IF 1:100-300 Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	FAM111A ; KIAA1895 ; Serine protease FAM111A ;
Observed Band	67kD
Calculated Molecular Weight	
Cell Pathway	Nucleus. Chromosome. Cytoplasm. Note=Mainly localizes to nucleus: colocalizes with PCNA on replication sites..
Tissue Specificity	
Function	Single-stranded DNA-binding serine protease that mediates the proteolytic cleavage of covalent DNA-protein cross-links (DPCs) during DNA synthesis, thereby playing a key role in maintaining genomic integrity (PubMed:32165630). DPCs are highly toxic DNA lesions that interfere with essential chromatin transactions, such as replication and transcription, and which are induced by reactive agents, such as UV light or formaldehyde (PubMed:32165630). Protects replication fork from stalling by removing DPCs, such as covalently trapped topoisomerase 1 (TOP1) adducts on DNA lesion, or poly(ADP-ribose) polymerase 1 (PARP1)-DNA complexes trapped by PARP inhibitors (PubMed:32165630). Required for PCNA loading on replication sites (PubMed:24561620). Promotes S-phase entry and DNA synthesis (PubMed:24561620). Acts also as a restriction factor for some viruses including SV40 polyomavirus and vaccinia virus (PubMed:23093934, PubMed:37607234). Mechanistically, affects nuclear barrier





function during viral replication by mediating the disruption of the nuclear pore complex (NPC) via its protease activity (PubMed:33369867, PubMed:37607234). In turn, interacts with vaccinia virus DNA-binding protein OPG079 in the cytoplasm and promotes its degradation without the need of its protease activity but through autophagy (PubMed:37607234). {ECO:0000269|PubMed:24561620, ECO:0000269|PubMed:32165630, ECO:0000269|PubMed:37607234}.

Background

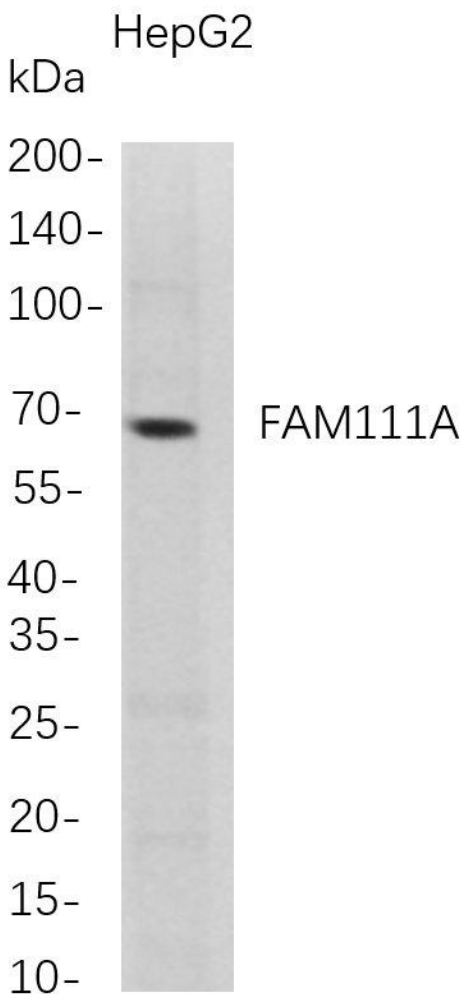
The protein encoded by this gene is cell-cycle regulated, and has nuclear localization. The C-terminal half of the protein shares homology with trypsin-like peptidases and it contains a PCNA-interacting peptide (PIP) box, that is necessary for its co-localization with proliferating cell nuclear antigen (PCNA). Reduced expression of this gene resulted in DNA replication defects, consistent with the demonstrated role for this gene in Simian Virus 40 (SV40) viral replication. Mutations in this gene have been associated with Kenny-Caffey syndrome (KCS) type 2 and the more severe osteocraniostenosis (OCS, also known as Gracile Bone Dysplasia), both characterized by short stature, hypoparathyroidism, bone development abnormalities, and hypocalcemia. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015],

matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Western Blot analysis of HepG2 whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-FAM111A rabbit mAb. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody.

