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GPN1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16654b

Product Information

Application	WB, E
Primary Accession	Q9HCN4
Other Accession	NP_001138520.1, NP_001138519.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36215
Calculated MW	41740
Antigen Region	325-352

Additional Information

Gene ID	11321
Other Names	GPN-loop GTPase 1, 365-, MBD2-interacting protein, MBDin, RNAPII-associated protein 4, XPA-binding protein 1, GPN1 {ECO:0000303|PubMed:20855544, ECO:0000312|HGNC:HGNC:17030}
Target/Specificity	This GPN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 325-352 amino acids from the C-terminal region of human GPN1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	GPN1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPN1 {ECO:0000303|PubMed:20855544, ECO:0000312|HGNC:HGNC:17030}
Function	Small GTPase involved in the correct assembly of RNA polymerase II

(RNAPII) complex, ensuring proper nuclear import of RNAPII (PubMed:11058119, PubMed:20855544, PubMed:21768307, PubMed:28153773). In vitro, exhibits a chaperone-like activity and a chaperone substrate protein can stimulate its GTPase activity. It is proposed to bind exposed hydrophobic peptide regions of newly synthesized RNAP II subunit, triggering the opening of a hydrophobic pocket in its GDP-bound state. This interaction likely traps exposed hydrophobic regions, preventing misassembly and providing a time window for association with the cognate RNAP II subunit. Peptide binding promotes GDP release, and increasing GTP affinity to facilitate GTP rebinding. Subsequent GTP hydrolysis would then lead to the release of the bound RNAP II subunit to enable association with cognate subunits and RNAP II assembly (By similarity). Forms an interface between the RNA polymerase II enzyme and chaperone/scaffolding proteins, suggesting that it is required to connect RNA polymerase II to regulators of protein complex formation (PubMed:17643375). May be involved in nuclear localization of XPA (PubMed:11058119).

Cellular Location Cytoplasm. Nucleus Note=Shuttles with GPN3 between the nucleus and the cytoplasm

Tissue Location Expressed ubiquitously.

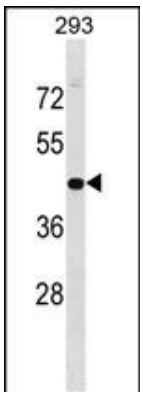
Background

This gene encodes a guanosine triphosphatase enzyme. The encoded protein may play a role in DNA repair and may function in activation of transcription. Alternatively spliced transcript variants have been described.

References

Lembo, F., et al. Mol. Cell. Biol. 23(5):1656-1665(2003)
Nitta, M., et al. Nucleic Acids Res. 28(21):4212-4218(2000)

Images



GPN1 Antibody (C-term) (Cat. #AP16654b) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the GPN1 antibody detected the GPN1 protein (arrow).

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