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MMS19 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18795c

Product Information

Application	WB, E
Primary Accession	Q96T76
Other Accession	NP_071757.4
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB38896
Calculated MW	113290
Antigen Region	411-437

Additional Information

Gene ID	64210
Other Names	MMS19 nucleotide excision repair protein homolog, hMMS19, MET18 homolog, MMS19-like protein, MMS19, MMS19L
Target/Specificity	This MMS19 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 411-437 amino acids from the Central region of human MMS19.
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	MMS19 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MMS19 (HGNC:13824)
Synonyms	MMS19L
Function	Key component of the cytosolic iron-sulfur protein assembly (CIA) complex,

	a multiprotein complex that mediates the incorporation of iron-sulfur cluster into apoproteins specifically involved in DNA metabolism and genomic integrity (PubMed:29848660). In the CIA complex, MMS19 acts as an adapter between early-acting CIA components and a subset of cellular target iron-sulfur proteins such as ERCC2/XPD, FANCJ and RTEL1, thereby playing a key role in nucleotide excision repair (NER), homologous recombination-mediated double-strand break DNA repair, DNA replication and RNA polymerase II (POL II) transcription (PubMed:22678361, PubMed:22678362, PubMed:23585563, PubMed:29225034). As part of the mitotic spindle-associated MMXD complex, plays a role in chromosome segregation, probably by facilitating iron-sulfur (Fe-S) cluster assembly into ERCC2/XPD (PubMed:20797633). Together with CIAO2, facilitates the transfer of Fe-S clusters to the motor protein KIF4A, which ensures proper localization of KIF4A to mitotic machinery components to promote the progression of mitosis (PubMed:29848660). Indirectly acts as a transcriptional coactivator of estrogen receptor (ER), via its role in iron-sulfur insertion into some component of the TFIIH-machinery (PubMed:11279242).
Cellular Location	Nucleus. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=In mitosis, enriched on centrosomes during prophase, localizes to the spindle during metaphase and surrounds compacted spindle midzone microtubules during telophase.
Tissue Location	Ubiquitously expressed with higher expression in testis.

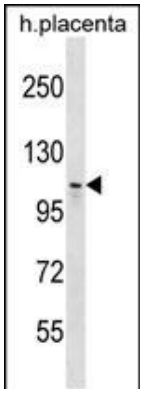
Background

MMS19 may play a role in nucleotide excision repair (NER) and RNA polymerase II (POL II) transcription by interacting with ERCC2/XPD and ERCC3/XPB helicases, both subunits of NER-transcription factor TFIIH. May also function as a transcriptional coactivator of estrogen receptor (ER). May be involved in regulation of ER activity by bridging TFIIH with ER or may facilitate TFIIH-mediated phosphorylation of ER in specific promoters and cell types.

References

Ito, S., et al. Mol. Cell 39(4):632-640(2010)
Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)
McWilliams, R.R., et al. Cancer Epidemiol. Biomarkers Prev. 18(4):1295-1302(2009)
Ewing, R.M., et al. Mol. Syst. Biol. 3, 89 (2007) :
Hatfield, M.D., et al. DNA Repair (Amst.) 5(8):914-924(2006)

Images



MMS19 Antibody (Center)(Cat. #AP18795c) western blot analysis in human placenta tissue lysates (35ug/lane).This demonstrates the MMS19 antibody detected the MMS19 protein (arrow).