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DHFR Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20626a

Product Information

Application	WB, IHC-P, E
Primary Accession	P00374
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB49346
Calculated MW	21453

Additional Information

Gene ID	1719
Other Names	Dihydrofolate reductase, DHFR
Target/Specificity	This DHFR antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 16-30 amino acids from the N-terminal region of human DHFR.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	DHFR Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DHFR (HGNC:2861)
Function	Catalyzes the reduction of 7,8-dihydrofolate (DHF) to 5,6,7,8-tetrahydrofolate in a NADPH-dependent manner (PubMed:12096917, PubMed:15039552, PubMed:17569517, PubMed:19196009, PubMed:19478082, PubMed:21876184, PubMed:9719595). Key enzyme in folate metabolism. Contributes to the nuclear and mitochondrial de novo thymidylate biosynthesis pathway (PubMed:21876188, PubMed:22235121).

	Catalyzes an essential reaction for de novo glycine and purine synthesis, and for DNA precursor synthesis. Binds its own mRNA and that of DHFR2.
Cellular Location	Mitochondrion {ECO:0000250|UniProtKB:P00375}. Cytoplasm {ECO:0000250|UniProtKB:P00375}. Nucleus. Note=Localized to the nucleus during S and G2/M phases of the cell cycle. As a component of the de novo thymidylate synthesis complex, localizes specifically to replication forks during DNA synthesis (PubMed:22235121)
Tissue Location	Widely expressed in fetal and adult tissues, including throughout the fetal and adult brains and whole blood Expression is higher in the adult brain than in the fetal brain

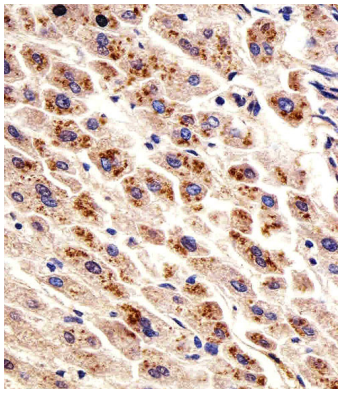
Background

Key enzyme in folate metabolism. Contributes to the de novo mitochondrial thymidylate biosynthesis pathway. Catalyzes an essential reaction for de novo glycine and purine synthesis, and for DNA precursor synthesis. Binds its own mRNA and that of DHFRL1.

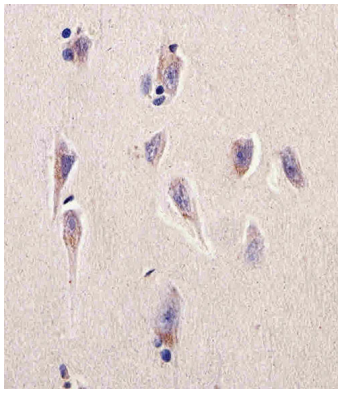
References

Chen M.-J.,et al.J. Biol. Chem. 259:3933-3943(1984).
Masters J.N.,et al.Gene 21:59-63(1983).
Yang J.K.,et al.J. Mol. Biol. 176:169-187(1984).
Schmutz J.,et al.Nature 431:268-274(2004).
Banka S.,et al.Am. J. Hum. Genet. 88:216-225(2011).

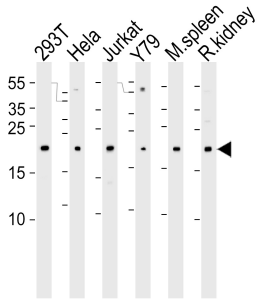
Images



Immunohistochemical analysis of paraffin-embedded H. liver section using DHFR Antibody (N-term)(Cat#AP20626a). AP20626a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. brain section using DHFR Antibody (N-term)(Cat#AP20626a). AP20626a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Western blot analysis of lysates from 293T, Hela, Jurkat, Y79 cell line , mouse spleen and rat kidney tissue lysate(from left to right), using DHFR Antibody (N-term)(Cat. #AP20626a). AP20626a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.