10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-DHFR Picoband Antibody

Catalog # ABO11868

Product Information

Application	WB, IHC-P
Primary Accession	P00374
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Dihydrofolate reductase(DHFR) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1719
Other Names	Dihydrofolate reductase, 1.5.1.3, DHFR
Calculated MW	21453
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Tissue Specificity	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. .
Source	Eukaryota
Protein Name	Dihydrofolate reductase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human DHFR recombinant protein (Position: V2-D187). Human DHFR shares 90% amino acid (aa) sequence identity with both mouse and rat DHFR.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated

	freezing and thawing.
Sequence Similarities	Belongs to the dihydrofolate reductase family.

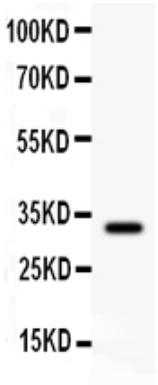
Protein Information

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

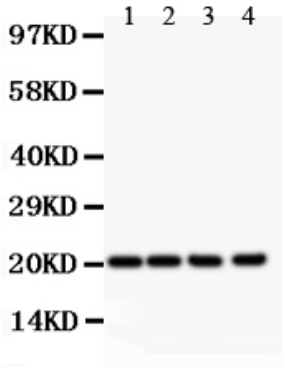
Dihydrofolate reductase, or DHFR, is an enzyme that reduces dihydrofolic acid to tetrahydrofolic acid, using NADPH as electron donor, which can be converted to the kinds of tetrahydrofolate cofactors used in 1-carbon transfer chemistry. In humans, the DHFR enzyme is encoded by the DHFR gene. It is found in the q11 □t'q22 region of chromosome 5. What's more, DHFR belongs to the dihydrofolate reductase family, and it converts dihydrofolate into tetrahydrofolate, a methyl group shuttle required for the de novo synthesis of purines, thymidylic acid, and certain amino acids. DHFR is the key enzyme in folate metabolism. In addition, DHFR catalyzes an essential reaction for de novo glycine and purine synthesis, and for DNA precursor synthesis.

Images

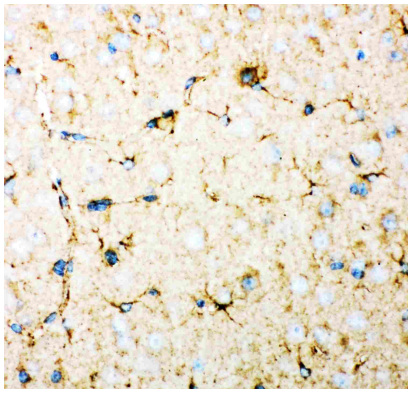


Anti- DHFR Picoband antibody, ABO11868, Western blottingAll lanes: Anti DHFR (ABO11868) at 0.5ug/mlWB: Recombinant Human DHFR Protein 0.5ngPredicted bind size: 32KDObserved bind size: 32KD

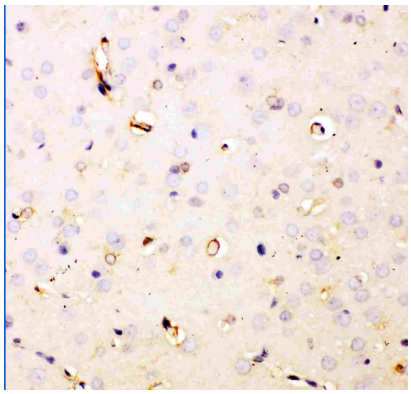
Anti- DHFR Picoband antibody, ABO11868, Western blottingAll lanes: Anti DHFR (ABO11868) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: Mouse Liver



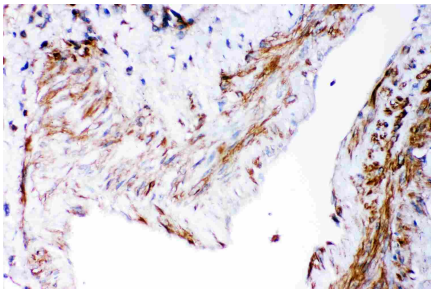
Tissue Lysate at 50ugLane 3: HepG2 Whole Cell Lysate at 40ugLane 4: Jurkat Whole Cell Lysate at 40ugPredicted bind size: 21KDObserved bind size: 21KD



Anti- DHFR Picoband antibody, ABO11868,IHC(P)IHC(P): Mouse Brain Tissue



Anti- DHFR Picoband antibody, ABO11868,IHC(P)IHC(P): Rat Brain Tissue



Anti- DHFR Picoband antibody, ABO11868,IHC(P)IHC(P): Human Lung Cancer Tissue

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