abcam

ab209933

Alexa Fluor® 647 Anti-DPD antibody [EPR8811]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8811
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/100
Notes	This product gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min)

Flow Cyt (Intra)

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Dihydropyrimidine dehydrogenase [NADP(+)]

Function	Involved in pyrimidine base degradation (PubMed:1512248). Catalyzes the reduction of uracil and thymine (PubMed:1512248). Also involved the degradation of the chemotherapeutic drug 5-fluorouracil (PubMed:1512248).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	DPD also known as dihydropyrimidine dehydrogenase is an enzyme important for the breakdown of pyrimidines particularly uracil and thymine. The DPD protein has an important role in the initial step of pyrimidine catabolism. It catalyzes the NADPH-dependent reduction of these pyrimidines to dihydrouracil and dihydrothymine. It consists of 1025 amino acids giving it a mass of approximately 111 kDa. DPD is expressed in various tissues with significant expression in the liver and to a lesser extent in peripheral blood lymphocytes.
Biological function summary	Dihydropyrimidine dehydrogenase impacts nucleotide metabolism which is significant for cellular replication and repair processes. DPD exists as part of a multi-enzyme complex that handles pyrimidine metabolism. It serves an important regulatory function by controlling the level of pyrimidines within cells. This

	regulation keeps the balance of free nucleotides which is critical for DNA synthesis and overall cellular homeostasis.
Pathways	DPD holds an important position in pyrimidine metabolism pathways and the drug metabolism pathway specifically influencing fluoropyrimidine-based chemotherapeutic agents. Within the pyrimidine metabolic pathway DPD links to other enzymes that further breakdown pyrimidines into more basic compounds. In drug metabolism DPD plays a vital role by metabolizing drugs like 5-fluorouracil. Its activity affects how individuals process these medications linking it to enzymes like thymidylate synthase that share pathways in cancer treatment drug action.
Associated diseases and disorders	DPD deficiency relates to a genetic disorder that causes an excessive build-up of uracil and thymine leading to developmental disorders and neurological problems. Additionally abnormalities in DPD activity influence the efficacy and toxicity of fluorouracil chemotherapy in cancer treatments. DPD enzymatic activity when not properly regulated can lead to severe toxic reactions especially in relation to therapies reliant on enzymes such as thymidylate synthase emphasizing the critical interplay between these proteins in the management of fluoropyrimidine drug treatments.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

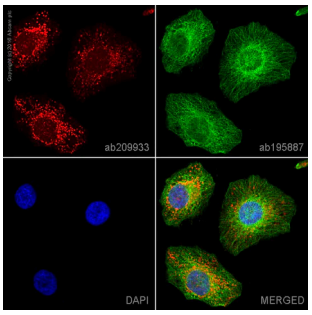
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-DPD antibody [EPR8811] (ab209933)

DPD Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DPD antibody

ab209933 staining DPD in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab209933 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 100% methanol (5min).

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