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DHRS2 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51756

Product Information

Application	WB
Primary Accession	Q13268
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29927

Additional Information

Gene ID	10202
Other Names	Dehydrogenase/reductase SDR family member 2, mitochondrial, 111-, Dicarbonyl reductase HEP27, Protein D, DHRS2
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human DHRS2. The exact sequence is proprietary.
Dilution	WB~~1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	DHRS2 (HGNC:18349)
Synonyms	SDR25C1
Function	NADPH-dependent oxidoreductase which catalyzes the reduction of dicarbonyl compounds. Displays reductase activity in vitro with 3,4-hexanedione, 2,3-heptanedione and 1-phenyl-1,2-propanedione as substrates (PubMed:16685466). May function as a dicarbonyl reductase in the enzymatic inactivation of reactive carbonyls involved in covalent modification of cellular components (PubMed:16685466). Also displays a minor hydroxysteroid dehydrogenase activity toward bile acids such as ursodeoxycholic acid (UDCA) and isoursodeoxycholic acid (isoUDCA), which makes it unlikely to control hormone levels (PubMed:16685466). Doesn't show any activity in vitro with retinoids and sugars as substrates (PubMed:16685466). Attenuates MDM2-mediated p53/TP53 degradation, leading to p53/TP53 stabilization and increased transcription activity, resulting in the accumulation of MDM2 and CDKN1A/p21 (PubMed:20547751). Reduces proliferation, migration and

	invasion of cancer cells and well as the production of ROS in cancer (PubMed:29106393).
Cellular Location	Mitochondrion matrix. Nucleus. Note=A minor fraction of the protein is translocated from the mitochondria to the nucleus, after cleavage of the targeting signal
Tissue Location	Widely expressed, with highest levels in liver and kidney, followed by heart, spleen, skeletal muscle and placenta. In hemopoietic cells, expressed in dendritic cells, but not in monocytes, macrophages, granulocytes, nor in B and T lymphocytes

Background

Displays NADPH-dependent dicarbonyl reductase activity in vitro with 3,4-Hexanedione, 2,3-Heptanedione and 1-Phenyl-1,2- propanedione as substrates. No reductase activity is displayed in vitro with steroids, retinoids and sugars as substrates. Attenuates MDM2-mediated p53/TP53 degradation, leading to p53/TP53 stabilization and increased transcription activity, resulting in the accumulation of MDM2 and CDKN1A/p21.

References

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Pellegrini S.,et al.Biochim. Biophys. Acta 1574:215-222(2002).
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Heilig R.,et al.Nature 421:601-607(2003).
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