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PGDH Recombinant Rabbit mAb

Catalog # AP100172

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P15428
Other Accession	P15428
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	28977
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HPGD
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the short-chain dehydrogenases/reductases (SDR) family.
SUBUNIT	Homodimer.
DISEASE	Hypertrophic osteoarthropathy, primary, autosomal recessive, 1 (PHOAR1) [MIM:259100]: A disease characterized by digital clubbing, periostosis, acroosteolysis, painful joint enlargement, and variable features of pachydermia that include thickened facial skin and a thickened scalp. Other developmental anomalies include delayed closure of the cranial sutures and congenital heart disease. Note=The disease is caused by mutations affecting the gene represented in this entry. Cranioosteoarthropathy (COA) [MIM:259100]: A form of osteoarthropathy characterized by swelling of the joints, digital clubbing, hyperhidrosis, delayed closure of the fontanels, periostosis, and variable patent ductus arteriosus. Pachydermia is not a prominent feature. Note=The disease is caused by mutations affecting the gene represented in this entry.Isolated congenital nail clubbing (ICNC) [MIM:119900]: A rare genodermatosis characterized by enlargement of the nail plate and terminal segments of the fingers and toes, resulting from proliferation of the connective tissues between the nail matrix and the distal phalanx. It is usually symmetrical and bilateral (in some cases unilateral). In nail clubbing usually the distal end of the nail matrix is relatively high compared to the proximal end, while the nail plate is complete but its dimensions and diameter more or less vary in comparison to normal. There may be different fingers and toes involved to varying degrees. Some fingers or toes are spared, but the thumbs are almost always involved. Note=The disease is caused by mutations affecting the gene represented in this entry.
Background Descriptions	This gene encodes a member of the short-chain nonmetalloenzyme alcohol dehydrogenase protein family. The encoded enzyme is responsible for the metabolism of prostaglandins, which function in a variety of physiologic and cellular processes such as inflammation. Mutations in this gene result in primary autosomal recessive hypertrophic osteoarthropathy and cranioosteoarthropathy. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009].

Additional Information

Gene ID	3248
Other Names	15-PGDH; PGDH; PGDH1; PHOAR1; SDR36C1; PGDH_HUMAN; HPGD; Eicosanoid/docosanoid dehydrogenase [NAD(+)]; Prostaglandin dehydrogenase 1; Short chain dehydrogenase/reductase family 36C member 1; 1.1.1.141; 15-hydroxyprostaglandin dehydrogenase; hydroxyprostaglandin dehydrogenase 15-(NAD); short chain dehydrogenase/reductase family 36C, member 1; 15-hydroxyprostaglandin dehydrogenase (NAD(+))
Dilution	IHC-P=1:50-200,WB=1:500-2000,IHC-F=1:50-200,IF=1:50-200,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	HPGD (HGNC:5154)
Synonyms	PGDH1, SDR36C1
Function	Catalyzes the NAD-dependent dehydrogenation (oxidation) of a broad array of hydroxylated polyunsaturated fatty acids (mainly eicosanoids and docosanoids, including prostaglandins, lipoxins and resolvins), yielding their corresponding keto (oxo) metabolites (PubMed:10837478, PubMed:16757471, PubMed:16828555, PubMed:21916491, PubMed:25586183, PubMed:8086429). Decreases the levels of the pro- proliferative prostaglandins such as prostaglandin E2 (whose activity is increased in cancer because of an increase in the expression of cyclooxygenase 2) and generates oxo-fatty acid products that can profoundly influence cell function by abrogating pro-inflammatory cytokine expression (PubMed:15574495, PubMed:25586183). Converts resolvins E1, D1 and D2 to their oxo products, which represents a mode of resolvin inactivation. Resolvin E1 plays important roles during the resolution phase of acute inflammation, while resolvins D1 and D2 have a unique role in obesity-induced adipose inflammation (PubMed:16757471, PubMed:22844113).
Cellular Location	Cytoplasm.
Tissue Location	Detected in colon epithelium (at protein level).

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