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C13orf31 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI13513

Product Information

Application	WB
Primary Accession	Q8IV20
Other Accession	NM_153218, NP_694950
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Chicken, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47780

Additional Information

Gene ID	144811
Alias Symbol	DKFZp686D11119, FLJ38725, C13orf31, RP11-5G9.2
Other Names	Laccase domain-containing protein 1, LACC1, C13orf31
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-C13orf31 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	C13orf31 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LACC1 {ECO:0000303|PubMed:25220867, ECO:0000312|HGNC:HGNC:26789}
Function	Purine nucleoside enzyme that catalyzes the phosphorolysis of adenosine, guanosine and inosine nucleosides, yielding D-ribose 1- phosphate and the respective free bases, adenine, guanine and hypoxanthine (PubMed:31978345). Also catalyzes the phosphorolysis of S-methyl-5'-thioadenosine into adenine and S-methyl-5-thio-alpha-D-ribose 1-phosphate (PubMed:31978345). Also has adenosine deaminase activity (PubMed:31978345). Acts as a regulator of innate immunity in macrophages by modulating the purine nucleotide metabolism, thereby regulating the metabolic function and bioenergetic state of macrophages (PubMed:31978345). Enables a purine nucleotide cycle between adenosine

and inosine monophosphate and adenylosuccinate that prevents cytoplasmic acidification and balances the cytoplasmic-mitochondrial redox interface (PubMed:31978345). The purine nucleotide cycle consumes aspartate and releases fumarate in a manner involving fatty acid oxidation and ATP-citrate lyase activity (PubMed:31978345). Participates in pattern recognition receptor (PRR)-induced cytokines in macrophages: associates with the NOD2-signaling complex and promotes optimal NOD2-induced signaling, cytokine secretion and bacterial clearance (PubMed:28593945, PubMed:31875558). Localizes to the endoplasmic reticulum upon PRR stimulation of macrophages and associates with endoplasmic reticulum-stress sensors, promoting the endoplasmic reticulum unfolded protein response (UPR) (PubMed:31875558). Component of L-arginine metabolism in activated macrophages supporting anti-inflammatory and antibacterial macrophage effector functions. Cleaves L-citrulline, a product of L-arginine metabolized via NOS2, to yield isocyanate, a reactive carbonyl species- like cytotoxin, and L-ornithine, a precursor in polyamine biosynthesis. Through L-ornithine controls cellular polyamine pools likely triggering polyamine-mediated proinflammatory cytokine suppression and autophagy stimulation (PubMed:35978195). Directly interacts with components of autophagy machinery to regulate macrophage metabolism and bacterial phagocytosis. Acts downstream of the energy sensor AMP-activated protein kinase (AMPK) to promote autophagy associated to lipid droplets generation providing fatty acids for mitochondrial respiration (PubMed:33606008). Does not show laccase activity (PubMed:27959965, PubMed:31978345).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q8BZT9}. Nucleus {ECO:0000250|UniProtKB:Q8BZT9}. Endoplasmic reticulum. Peroxisome. Note=Upon stimulation of the pattern- recognition receptor (PRR) NOD2, localizes to the endoplasmic reticulum.

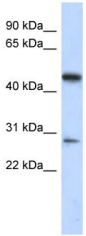
Tissue Location

Ubiquitously expressed, with higher expression levels in immune-related tissues such as lymph nodes and spleen (PubMed:27959965). Expressed in both intestinal and peripheral myeloid- derived cells (PubMed:28593945).

References

Ota T.,et al.Nat. Genet. 36:40-45(2004).
Dunham A.,et al.Nature 428:522-528(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images



WB Suggested Anti-C13orf31 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:1562500
Positive Control: Human Lung

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