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FLVCR2 Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15330

Product Information

Application	WB
Primary Accession	Q9UPI3
Other Accession	NM_017791, NP_060261
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57241

Additional Information

Gene ID	55640
Alias Symbol	C14orf58, CCT, FLJ20371, FLVCRL14q, EPV, PVHH, MFSD7C
Other Names	Feline leukemia virus subgroup C receptor-related protein 2, Calcium-chelate transporter, CCT, FLVCR2, C14orf58
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-FLVCR2 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	FLVCR2 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

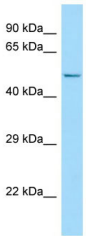
Name	FLVCR2 {ECO:0000303|PubMed:20823265, ECO:0000312|HGNC:HGNC:20105}
Function	Choline uniporter that specifically mediates choline uptake at the blood-brain-barrier (PubMed:38302740, PubMed:38778100). Responsible for the majority of choline uptake across the blood-brain- barrier from the circulation into the brain (By similarity). Choline, a nutrient critical for brain development, is a precursor of phosphatidylcholine, as well as betaine (By similarity). Also mediates transport of ethanolamine (PubMed:38778100). Choline and ethanolamine transport is not coupled with proton transport and is exclusively driven by the choline gradient across the plasma membrane (PubMed:38778100). However, the presence of an inwardly directed proton

	gradient enhances choline uptake (By similarity). Also acts as a heme b transporter (PubMed:20823265, PubMed:32973183). Required to regulate mitochondrial respiration processes, ATP synthesis and thermogenesis (PubMed:32973183). At low heme levels, interacts with components of electron transfer chain (ETC) complexes and ATP2A2, leading to ubiquitin-mediated degradation of ATP2A2 and inhibition of thermogenesis (PubMed:32973183). Upon heme binding, dissociates from ETC complexes to allow switching from mitochondrial ATP synthesis to thermogenesis (PubMed:32973183).
Cellular Location	Cell membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=Present on both luminal (blood-facing) and abluminal (brain-facing) sides of brain endothelial cell plasma membranes, with higher luminal membrane expression (By similarity) Also localizes in mitochondria where it interacts with components of the electron transfer complexes III, IV and V (PubMed:32973183) Colocalizes with ATP2A2 at the mitochondrial-ER contact junction (PubMed:32973183). {ECO:0000250|UniProtKB:Q91X85, ECO:0000269|PubMed:32973183}
Tissue Location	Expressed in non-hematopoietic tissues, with relative abundant expression in brain, placenta, lung, liver and kidney (PubMed:20823265). Also expressed in hematopoietic tissues (fetal liver, spleen, lymph node, thymus, leukocytes and bone marrow) (PubMed:20823265). Found in acidophil cells of the pituitary that secrete growth hormone and prolactin (at protein level) (PubMed:14729055).

References

Brasier G.,et al.Exp. Cell Res. 293:31-42(2004).
Brown J.,et al.Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Heilig R.,et al.Nature 421:601-607(2003).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images



WB Suggested Anti-FLVCR2 Antibody Titration: 1.0 µg/ml
Positive Control: HT1080 Whole Cell