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PTGDR2 Antibody

Catalog # ASC11603

Product Information

Application	WB, IF, E
Primary Accession	Q9Y5Y4
Other Accession	NP_004769, 153791424
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	43268
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PTGDR2 antibody can be used for detection of PTGDR2 by Western blot at 0.5 - 1 □g/mL.

Additional Information

Gene ID	11251
Other Names	Prostaglandin D2 receptor 2, Chemoattractant receptor-homologous molecule expressed on Th2 cells, G-protein coupled receptor 44, CD294, PTGDR2, CRTH2, DL1R, GPR44
Target/Specificity	PTGDR2;
Reconstitution & Storage	PTGDR2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	PTGDR2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTGDR2
Synonyms	CRTH2, DL1R, GPR44
Function	Receptor for prostaglandin D2 (PGD2). Coupled to the G(i)- protein. Receptor activation may result in pertussis toxin-sensitive decreases in cAMP levels and Ca(2+) mobilization. PI3K signaling is also implicated in mediating PTGDR2 effects. PGD2 induced receptor internalization. CRTH2 internalization can be regulated by diverse kinases such as, PKC, PKA, GRK2, GPRK5/GRK5 and GRK6. Receptor activation is responsible, at least in part, in immune regulation and allergic/inflammation responses.
Cellular Location	Cell membrane; Multi-pass membrane protein. Note=Internalized receptors

colocalized with RAB11A.

Tissue Location

Widespread expression. High expression in stomach, small intestine, heart and thymus. Intermediate expression in colon, spinal cord and peripheral blood and low expression in brain, skeletal muscle and spleen. Expressed also on Th2- and Tc2- type cells, eosinophils and basophils.

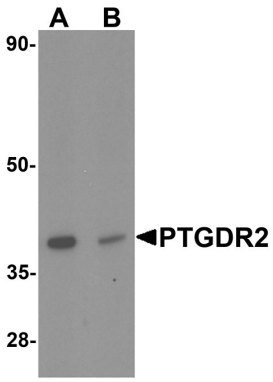
Background

PTGDR2 Antibody: The prostaglandin D2 receptor 2 (PTGDR2), also known as CRTH2, is expressed on Th2 cells and eosinophils and mediates chemotaxis of these cells to PGD2 and is thus thought to be a key receptor mediating eosinophil and Th2 recruitment during allergic responses. However, PTGDR2-null mice showed enhanced eosinophil recruitment into the lung consistent with observations that the PTGDR2-null mice produced significantly higher amounts of interleukin-5 (IL-5) and IL-3. This suggests that PTGDR2 plays a nonredundant role in restricting eosinophilia and allergic response in vivo.

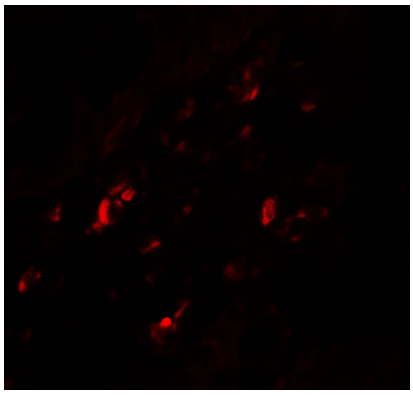
References

Nagata K, Hirai K, Tanaka K, et al. CRTH2, an orphan receptor of T-helper-2-cells, is expressed on basophils and eosinophils and responds to mast cell-derived factor(s). FEBS Lett. 1999; 459:195-9.
Shichijo M, Sugimoto H, Nagao K, et al. Chemoattractant receptor-homologous molecule expressed on Th2 cells activation in vivo increases blood leukocyte counts and its blockage abrogates 13,14-dihydro-15-keto-prostaglandin D2-induced eosinophilia in rats. J. Pharmacol. Exp. Ther. 2003; 307:518-25.
Chevalier E, Stock J, Fisher T, et al. Cutting edge: chemoattractant receptor-homologous molecule expressed on Th2 cells plays a restricting role on IL-5 production and eosinophil recruitment. J. Immunol. 2005; 2056-60.

Images



Western blot analysis of PTGDR2 in small intestine tissue lysate with PTGDR2 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunofluorescence of PTGDR2 in human small intestine tissue with PTGDR2 antibody at 20 µg/ml.

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