

CRTH2 Antibody
Catalog # ASC10495**Specification**

CRTH2 Antibody - Product Information

Application	WB, IHC, IF
Primary Accession	Q9Y5Y4
Other Accession	NP_004769 , 153791424
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 43, 55 kDa

Application Notes	Observed: 60 kDa KDa CRTH2 antibody can be used for detection of CRTH2 by Western blot a 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.
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CRTH2 Antibody - Additional Information

Gene ID **11251**

Other Names

CRTH2 Antibody: DP2, DL1R, CD294, CRTH2, GPR44, Prostaglandin D2 receptor 2, Chemoattractant receptor-homologous molecule expressed on Th2 cells, G protein-coupled receptor 44

Target/Specificity

GPR44; At least two different isoforms of CRTH2 are known to exist; this antibody will detect both isoforms.

Reconstitution & Storage

CRTH2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions

CRTH2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CRTH2 Antibody - 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.

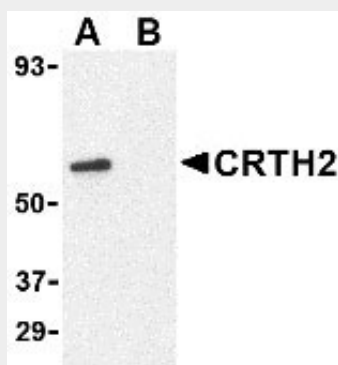
Tissue Location

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.

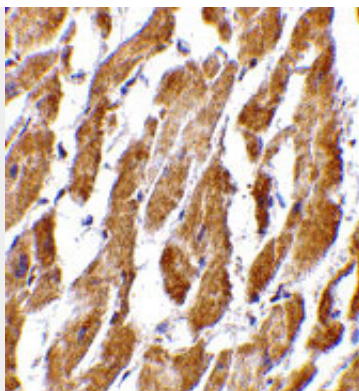
CRTH2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

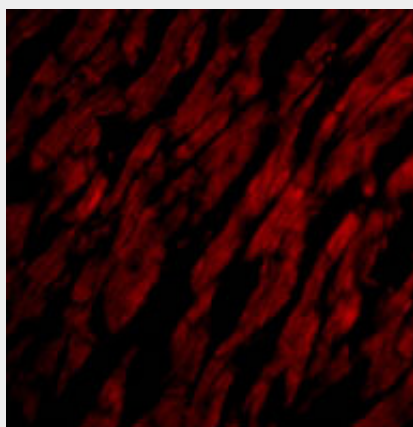
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CRTH2 Antibody - Images

Western blot analysis of CRTH2 in Jurkat cell lysate with CRTH2 antibody at 1 µg/mL in (A) the absence and (B) presence of blocking peptide.



Immunohistochemistry of CRTH2 in human heart tissue with CRTH2 antibody at 2.5 µg/mL.



Immunofluorescence of CRTH2 in Human Heart tissue with CRTH2 antibody at 20 µg/mL.

CRTH2 Antibody - Background

CRTH2 Antibody: The chemoattractant receptor-homologous molecule expressed on Th2 cells (CRTH2) is a recently identified receptor for the prostaglandin D2 (PGD2) in addition to the classic prostaglandin D receptor. 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, CRTH2-null mice showed enhanced eosinophil recruitment into the lung consistent with observations that the CRTH2-null mice produced significantly higher amounts of interleukin-5 (IL-5) and IL-3. This suggests that CRTH2 plays a nonredundant role in restricting eosinophilia and allergic response in vivo.

CRTH2 Antibody - 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.