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# CRTH2 Antibody

Catalog # ASC10495

## Product Information

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| **Application** | WB, IF, E, IHC-P |
| **Primary Accession** | Q9Y5Y4 |
| **Other Accession** | NP_004769, 153791424 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 43268 |
| **Concentration (mg/ml)** | 1 mg/mL |
| **Conjugate** | Unconjugated |
| **Application Notes** | CRTH2 antibody can be used for detection of CRTH2 by Western blot a 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL. |

## Additional Information

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| **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℃ for three months and -20℃, 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. |

## Protein Information

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| **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. |

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| | 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. |

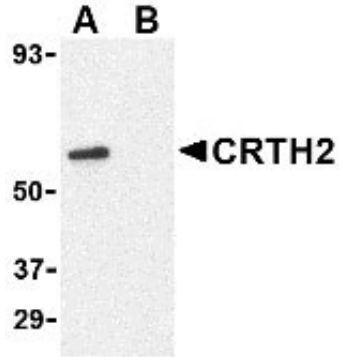
## Background

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.

## References

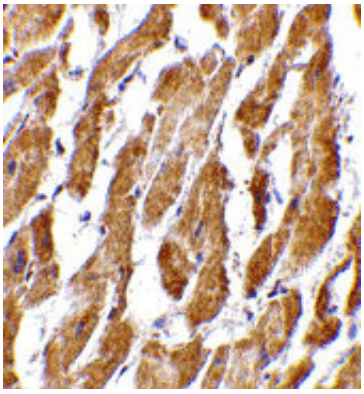
Nagata K, Hirai K, Tanaka K, et al. CRTH2, an orphan receptor of T-helper-2-cells, is expressed on basophils and eosinophils and responds to mast cell-derived factor(s). FEBS Lett. 1999; 459:195-9.
Shichijo M, Sugimoto H, Nagao K, et al. Chemoattractant receptor-homologous molecule expressed on Th2 cells 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.

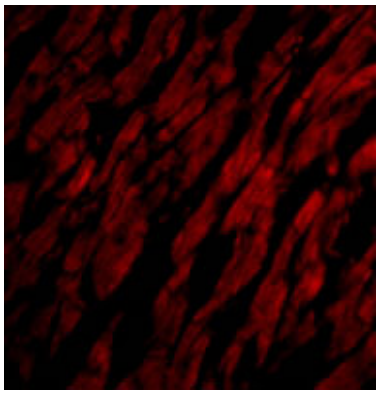
## Images




Western blot analysis of 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.

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