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RARRES2 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22232a

Product Information

Application	WB, IF, FC, E
Primary Accession	Q99969
Other Accession	Q5R551
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB56708
Calculated MW	18618

Additional Information

Gene ID	5919
Other Names	Retinoic acid receptor responder protein 2, Chemerin, RAR-responsive protein TIG2, Tazarotene-induced gene 2 protein, RARRES2, TIG2
Target/Specificity	This RARRES2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 01-35 amino acids from human RARRES2.
Dilution	WB~~1:2000 IF~~1:25 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RARRES2 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RARRES2
Synonyms	TIG2
Function	Adipocyte-secreted protein (adipokine) that regulates adipogenesis,

	metabolism and inflammation through activation of the chemokine-like receptor 1 (CMKLR1). Also acts as a ligand for CMKLR2. Can also bind to C-C chemokine receptor-like 2 (CCRL2), but with a lower affinity than it does to CMKLR1 or CMKLR2 (PubMed:27716822). Positively regulates adipocyte differentiation, modulates the expression of adipocyte genes involved in lipid and glucose metabolism and might play a role in angiogenesis, a process essential for the expansion of white adipose tissue. Also acts as a pro-inflammatory adipokine, causing an increase in secretion of pro-inflammatory and prodiabetic adipokines, which further impair adipose tissue metabolic function and have negative systemic effects including impaired insulin sensitivity, altered glucose and lipid metabolism, and a decrease in vascular function in other tissues. Can have both pro- and anti-inflammatory properties depending on the modality of enzymatic cleavage by different classes of proteases. Acts as a chemotactic factor for leukocyte populations expressing CMKLR1, particularly immature plasmacytoid dendritic cells, but also immature myeloid DCs, macrophages and natural killer cells. Exerts an anti-inflammatory role by preventing TNF/TNFA-induced VCAM1 expression and monocytes adhesion in vascular endothelial cells. The effect is mediated via inhibiting activation of NF-kappa-B and CRK/p38 through stimulation of AKT1/NOS3 signaling and nitric oxide production. Its dual role in inflammation and metabolism might provide a link between chronic inflammation and obesity, as well as obesity-related disorders such as type 2 diabetes and cardiovascular disease. Exhibits an antimicrobial function in the skin.
Cellular Location	Secreted {ECO:0000250|UniProtKB:Q9DD06}.
Tissue Location	Expressed at the highest levels in placenta, liver, and white adipose tissue (WAT), and to a lesser extent in many other tissues such as lung, brown adipose tissue, heart, ovary, kidney, skeletal muscle and pancreas. Within WAT, expression is enriched in adipocytes as compared to the stromal vascular fraction. Expression and secretion increases dramatically with adipogenesis. Highly expressed in skin (basal and suprabasal layers of the epidermis, hair follicles and endothelial cells). Expression is elevated in numerous metabolic and inflammatory diseases including psoriasis, obesity, type 2 diabetes, metabolic syndrome and cardiovascular disease

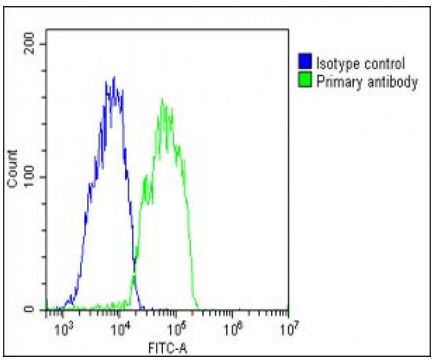
Background

Adipocyte-secreted protein (adipokine) that regulates adipogenesis, metabolism and inflammation through activation of the chemokine-like receptor 1 (CMKLR1). Its other ligands include G protein-coupled receptor 1 (GPR1) and chemokine receptor-like 2 (CCRL2). Positively regulates adipocyte differentiation, modulates the expression of adipocyte genes involved in lipid and glucose metabolism and might play a role in angiogenesis, a process essential for the expansion of white adipose tissue. Also acts as a proinflammatory adipokine, causing an increase in secretion of proinflammatory and prodiabetic adipokines, which further impair adipose tissue metabolic function and have negative systemic effects including impaired insulin sensitivity, altered glucose and lipid metabolism, and a decrease in vascular function in other tissues. Can have both pro- and anti-inflammatory properties depending on the modality of enzymatic cleavage by different classes of proteases. Acts as a chemotactic factor for leukocyte populations expressing CMKLR1, particularly immature plasmacytoid dendritic cells, but also immature myeloid DCs, macrophages and natural killer cells. Exerts an anti-inflammatory role by preventing TNF/TNFA-induced VCAM1 expression and monocytes adhesion in vascular endothelial cells. The effect is mediated via inhibiting activation of NF-kappa-B and CRK/p38 through stimulation of AKT1/NOS3 signaling and nitric oxide production. Its dual role in inflammation and metabolism might provide a link between chronic inflammation and obesity, as well as obesity- related disorders such as type 2 diabetes and cardiovascular disease. Exhibits an antimicrobial function in the skin.

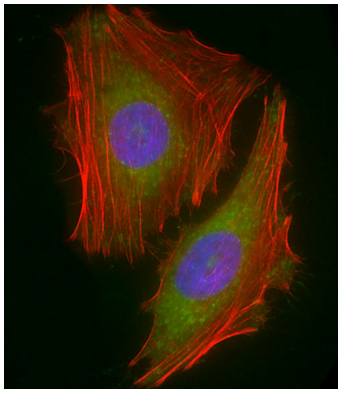
References

Nagpal S.,et al.J. Invest. Dermatol. 109:91-95(1997).
Yokoyama-Kobayashi M.,et al.Gene 228:161-167(1999).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 424:157-164(2003).

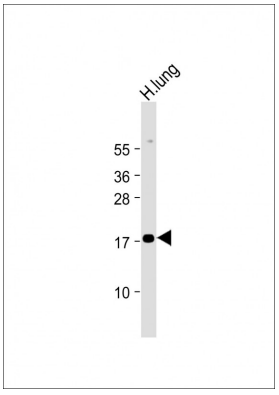
Images



Overlay histogram showing HepG2 cells stained with AP22232a(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22232a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling RARRES2 with AP22232a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing mitochondrion staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



Anti-RARRES2 Antibody (N-Term) at 1:2000 dilution + Human lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 19 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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