

Datasheet for 600-401-GR8**Nuclear receptor ROR gamma phospho S203 Antibody****Overview**

Description:	Anti-Nuclear receptor ROR gamma pS203 (RABBIT) Antibody - 600-401-GR8
Item No.:	600-401-GR8
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	Anti-Nuclear receptor ROR gamma pS203 was designed, produced, and validated as part of the Joy Cappel Young Investigator Award (JCYIA). Nuclear receptor ROR gamma pS203 antibody detects mouse receptor ROR gamma phosphorylated at the serine 203 position. RAR-related orphan receptor gamma is a member of the nuclear receptor family of transcription factors. (ROR-gamma) is a key regulator of cellular differentiation, immunity, peripheral circadian rhythm as well as lipid, steroid, xenobiotics and glucose metabolism. ROR-gamma regulates the circadian expression of clock genes such as CRY1, ARNTL/BMAL1 and NR1D1 in peripheral tissues and in a tissue-selective manner. It is also involved in the regulation of the rhythmic expression of genes involved in glucose and lipid metabolism and is a negative regulator of adipocyte differentiation. It controls adipogenesis as well as adipocyte size and modulates insulin sensitivity in obesity. Isoform 2, ROR-gamma is essential for lymphoid organogenesis, in particular lymph nodes and Peyer's patches. ROR-gamma also plays an important regulatory role in thymopoiesis, and in inhibiting apoptosis of undifferentiated T cells. Anti-nuclear receptor ROR gamma pS203 is ideal for researcher's interested in autoimmune diseases such as psoriasis and rheumatoid arthritis, circadian rhythms, and immune system disorders.
Synonyms:	rabbit anti-receptor ROR gamma pS203 antibody, Nuclear receptor ROR-gamma, Nr1f3, RAR-related orphan receptor C, Nuclear receptor RZR-gamma, Thymus orphan receptor, Nuclear receptor subfamily 1 group F member 3, Retinoid-related orphan receptor-gamma, TOR, Thor, Rorg, Rorc
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Rorc
Reactivity:	Mouse
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Affinity purified Anti-receptor ROR gamma pS203 antibody was prepared from whole rabbit serum produced by repeated immunizations with an internal synthetic peptide phosphorylated at the serine 203 position of mouse receptor ROR gamma protein.
Purity/Specificity:	Anti-nuclear receptor ROR gamma pS203 is directed against mouse receptor ROR gamma phosphorylated at the serine 203 position. This product is an affinity purified antibody produced by immunoaffinity chromatography using phospho peptide coupled to agarose beads followed by solid phase adsorption(s) against non-phospho peptide to remove any unwanted reactivities. A BLAST analysis was used to suggest reactivity with this protein with pongo abelii based on 100% homology for the immunogen sequence.
Relevant Links:	• NCBI - NP_001280663.1 • UniProtKB - P51450 • GeneID - 19885

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band ~ 61 kDa in size corresponding to receptor ROR gamma by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5 µg/ml
WB:	1 ug/mL

Formulation

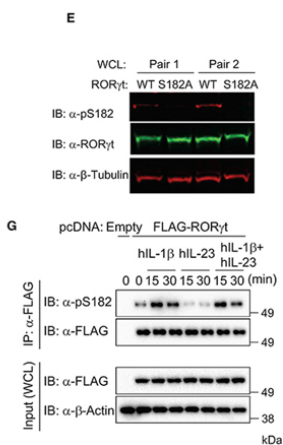
Physical State:	Liquid (sterile filtered)
Concentration:	1.05 mg/ml by UV absorbance at 280 nm

Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

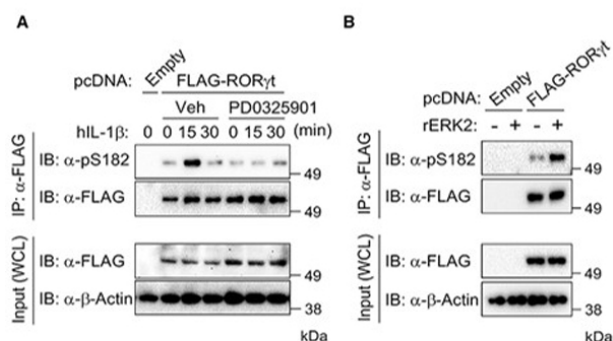


Western Blot

(E) Immunoblot (IB) analysis of total RORyt or RORyt phosphorylated at S182 (pS182) in cultured Th17 WCL from 2 pairs of RORytWT and RORytS182A littermates.

(G) HEK293 cells transfected with empty or 2xFLAG-RORyt expression constructs for 16 h were stimulated with the indicated cytokines. RORyt was captured by anti-FLAG beads and pS182 status was detected by immunoblot.

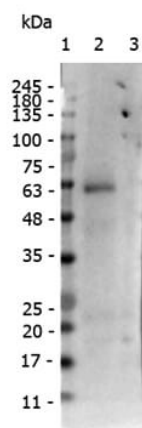
Fig 6. PMID: 35294872



Western Blot

(A) HEK293 cells transfected with empty or 2xFLAG-ROR γ t expression constructs for 16 h were treated with dimethylsulfoxide (DMSO, Veh) or ERK inhibitor (PD0325901, 5 μ M) and stimulated with the indicated cytokines. ROR γ t was captured by anti-FLAG beads and pS182 status was detected by immunoblot.

(B) HEK293 cells transfected with empty or 2xFLAG-ROR γ t expression constructs for 16 h. ROR γ t was captured by anti-FLAG beads and incubated with recombinant ERK2 in vitro. Phospho-S182 status was detected by immunoblot. This experiment was repeated twice with similar results. Fig 7. PMID: 35294872



Western Blot

Western Blot of Rabbit anti-receptor ROR gamma pS203 antibody. Lane 1: Opal PreStained Ladder (p/n MB-210-0500). Lane 2: Wild-type Mouse Thymus. Lane 3: KO Mouse Thymus. Load: 10 μ g per lane. Primary antibody: Receptor ROR gamma pS203 antibody at 1 μ g/mL for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: (p/n MB-070) for 30 minutes at RT. Predicted/Observed size: 63 kDa for ROR gamma.

References

- Ma S et al. ROR γ t phosphorylation protects against T cell-mediated inflammation. *Cell Rep.* (2022)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.