APC-Labeled Human ROR1 Protein, His TagStar Staining

Catalog # RO1-HA2H4

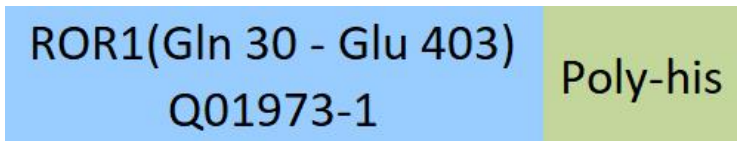
Synonym

ROR1,NTRKR1

Source

APC-Labeled Human ROR1 Protein, His Tag (RO1-HA2H4) is produced via conjugation of APC to Human ROR1 Protein, His Tag with a new generation site-specific technology under Star Staining labeling platform. Human ROR1 Protein, His Tag is expressed from human 293 cells (HEK293). It contains AA Gln 30 - Glu 403 (Accession # Q01973-1).
Predicted N-terminus: Gln 30

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 56.5 kDa.

Conjugate

APC

Excitation Wavelength: 640 nm

Emission Wavelength: 661 nm

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.2% BSA, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

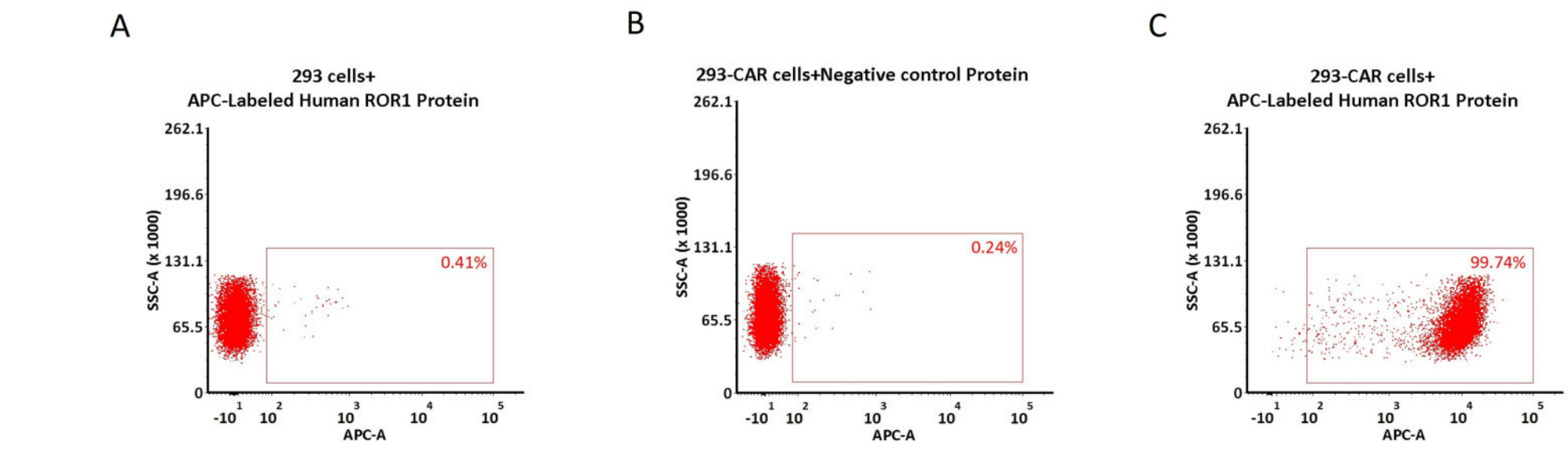
Please protect from light and avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

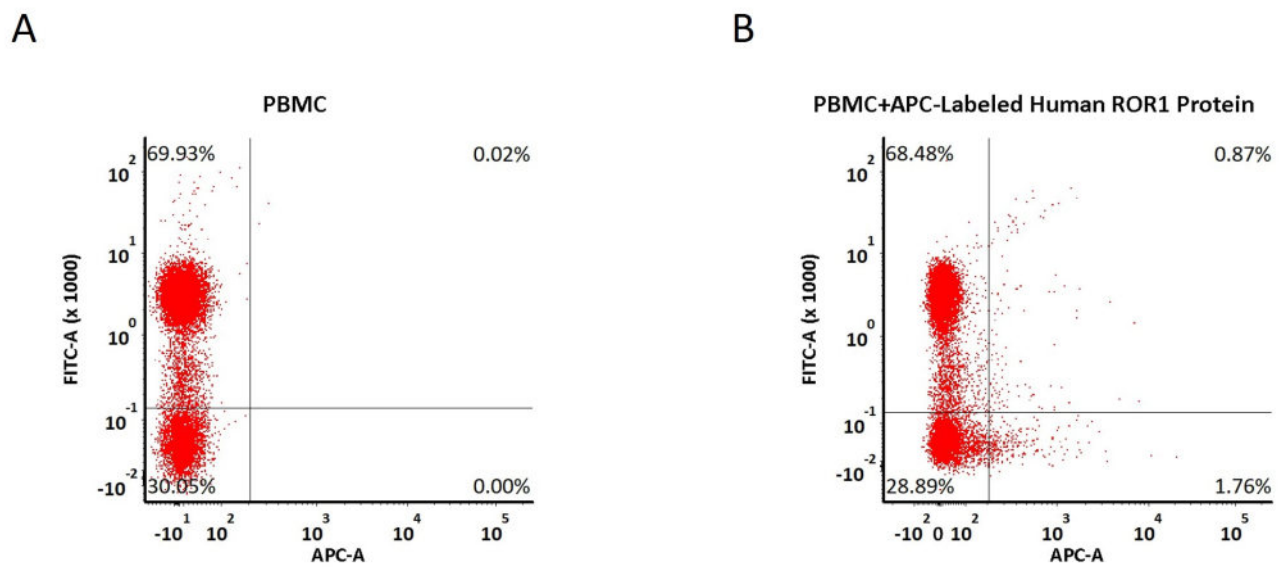
Evaluation of CAR expression

FACS Analysis of Anti-ROR1 CAR Expression



5e5 of anti-ROR1 CAR-293 cells were stained with 100 μL of 1:50 dilution (2 μL stock solution in 100 μL FACS buffer) of APC-Labeled Human ROR1 Protein, His Tag (Cat. No. RO1-HA2H4) and negative control protein respectively (Fig. C and B), and non-transfected 293 cells were used as a control (Fig. A). APC signal was used to evaluate the binding activity (QC tested).

FACS Analysis of Non-specific binding to PBMCs



5e5 of PBMCs were stained with APC-Labeled Human ROR1 Protein, His Tag (Cat. No. RO1-HA2H4) and anti-CD3 antibody, washed and then analyzed with FACS. FITC signal was used to evaluate the expression of CD3+ T cells in PBMCs, and APC signal was used to evaluate the non-specific binding activity to PBMCs (QC tested).

Background

Tyrosine-protein kinase transmembrane receptor ROR1 is also known as Neurotrophic tyrosine kinase, receptor-related 1 (NTRKR1), which belongs to the protein kinase superfamily or tyr protein kinase family or ROR subfamily. ROR1 contains 1 FZ (frizzled) domain, 1 Ig-like C2-type (immunoglobulin-like) domain, 1 kringle domain, 1 protein kinase domain. ROR1 is expressed at high levels during early embryonic development. The expression levels drop strongly around day 16 and there are only very low levels in adult tissues. Isoform Short is strongly expressed in fetal and adult CNS and in a variety of human cancers, including those originating from CNS or PNS neuroectoderm. ROR1 could interact with casein kinase 1 epsilon (CK1ε) to activate phosphoinositide 3-kinase-mediated AKT phosphorylation and cAMP-response-element-binding protein (CREB), which was associated with enhanced tumor-cell growth.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.