

# PE-Labeled Human ROR1 Protein, His Tag (Site-specific conjugation)

Catalog # RO1-HP2E3



BIOSYSTEMS  
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## Synonym

ROR1,NTRKR1

## Source

PE-Labeled Human ROR1, His Tag (RO1-HP2E3) is produced via site-specific conjugation of PE to Human ROR1 (30-403), His Tag under optimal conditions with a proprietary technology. Human ROR1, His Tag (RO1-HP2E3) is expressed from human 293 cells (HEK293). It contains AA Gln 30 - Glu 403 (Accession # [Q01973-1](#)).

Predicted N-terminus: Gln 30

## Molecular Characterization

ROR1(Gln 30 - Glu 403)  
Q01973-1 Poly-his

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

The protein has a calculated MW of 45.6 kDa.

## Conjugate

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 nm

## Application

Please note that this product is NOT compatible to streptavidin detection system.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 0.5% 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

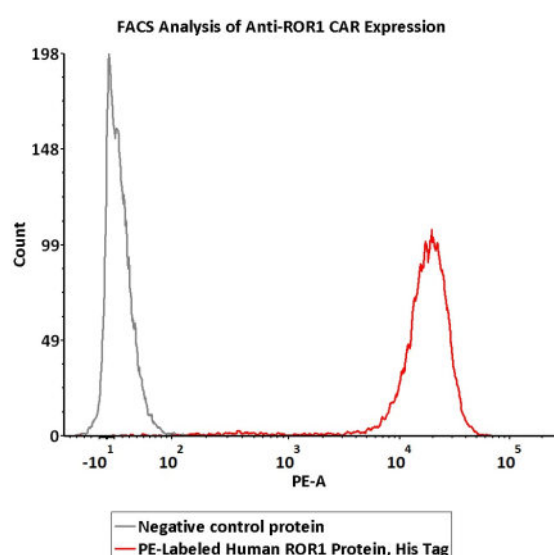
For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

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

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

## Bioactivity-FACS



$5 \times 10^5$  of anti-ROR1 CAR-293 cells were stained with 100  $\mu$ L of 1:50 dilution (2  $\mu$ L stock solution in 100  $\mu$ L FACS buffer) of PE-Labeled Human ROR1 Protein, His Tag (Cat. No. RO1-HP2E3) and negative control protein respectively. PE signal was used to evaluate the binding activity (QC tested).

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### 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 (CK1 $\epsilon$ ) 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

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