Human / Cynomolgus / Rhesus macaque ROR1 Protein, His Tag (MALS verified)

Catalog # RO1-H522y

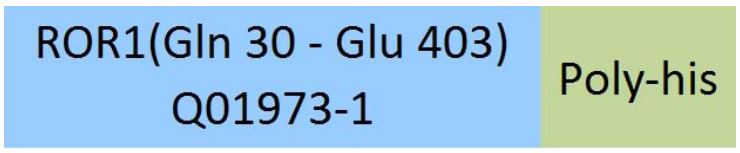
Synonym

ROR1,NTRKR1

Source

Human / Cynomolgus / Rhesus macaque ROR1, His Tag (RO1-H522y) is expressed from human 293 cells (HEK293). It contains AA Gln 30 - Glu 403 (Accession # Q01973-1). In the region Gln 30 - Glu 403, the AA sequence of Human, Cynomolgus and Rhesus macaque ROR1 are homologus.
Predicted N-terminus: Gln 30

Molecular Characterization



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

The protein has a calculated MW of 43.9 kDa. The protein migrates as 55-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 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

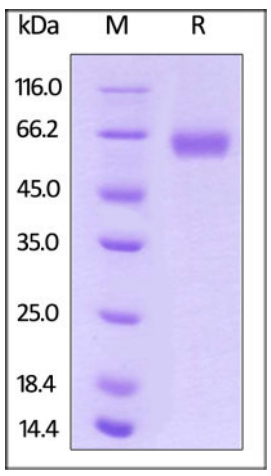
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

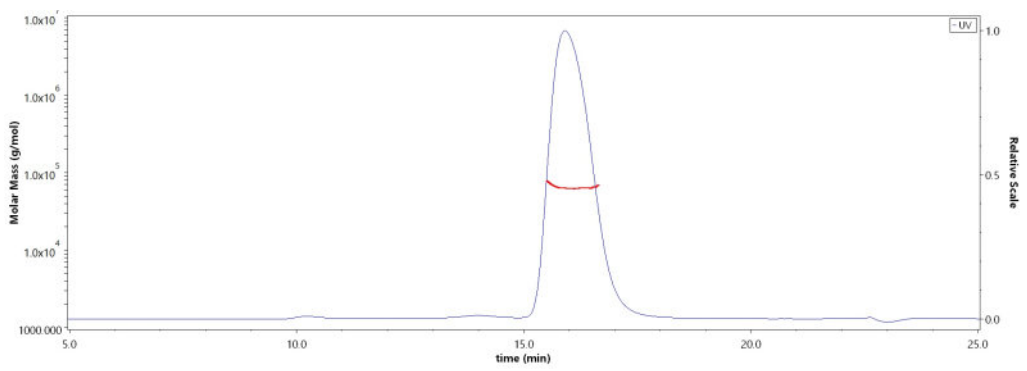
- -20°C to -70°C for 30 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



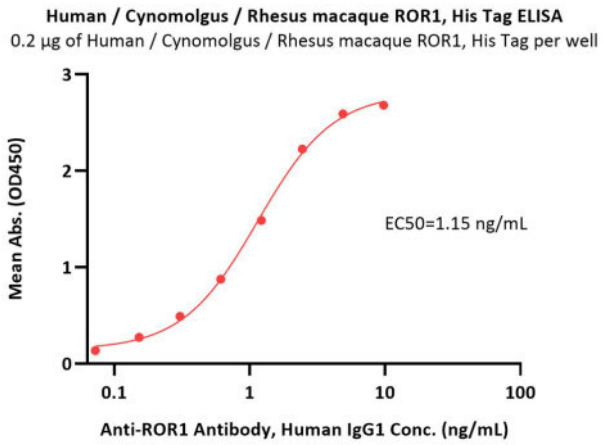
Human / Cynomolgus / Rhesus macaque ROR1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

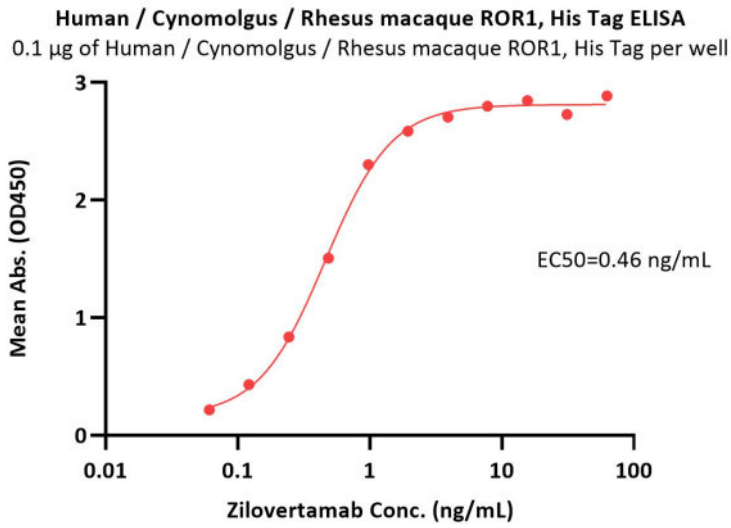


The purity of Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) is more than 95% and the molecular weight of this protein is around 55-70 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

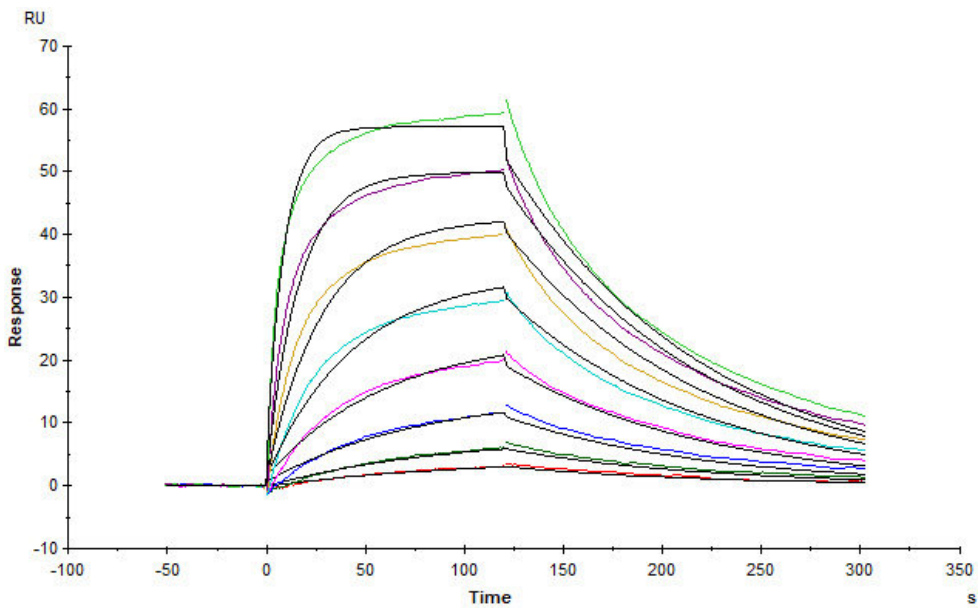


Immobilized Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) at 2 μg/mL (100 μL/well) can bind Anti-ROR1 Antibody, Human IgG1 with a linear range of 0.2-2 ng/mL (QC tested).



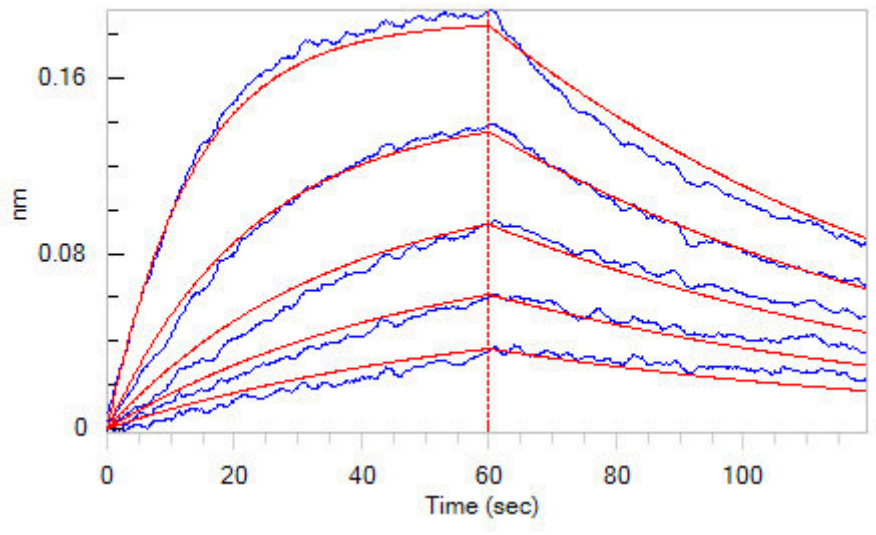
Immobilized Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) at 1 μg/mL (100 μL/well) can bind Zilovertamab with a linear range of 0.06-1 ng/mL (Routinely tested).

Bioactivity-SPR



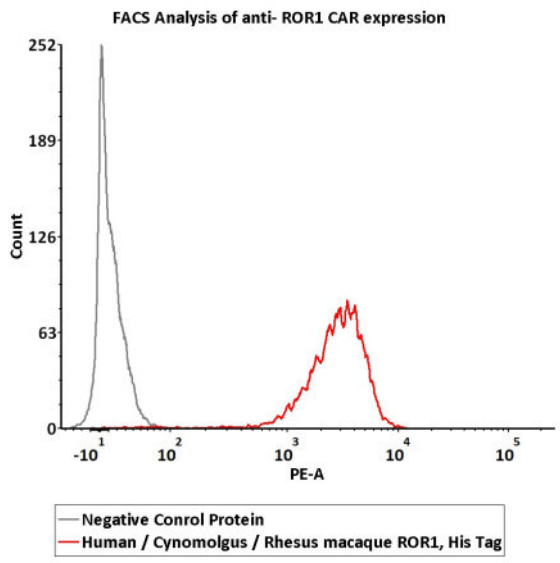
Anti-Human ROR1 mAb captured on CM5 chip via anti-mouse antibodies surface can bind Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) with an affinity constant of 4.9 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Loaded Anti-Human ROR1 MAb (Mouse IgG1) on AMC Biosensor, can bind Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) with an affinity constant of 10.2 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS



2e5 of anti-ROR1 CAR-293 cells were stained with 100 μL of 10 μg/mL of Human / Cynomolgus / Rhesus macaque ROR1, His Tag (Cat. No. RO1-H522y) and negative control protein respectively, washed and then followed by PE-anti-His Tag antibody and analyzed with FACS (Routinely 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