

**Synonym**

OSCAR, Osteoclast-associated receptor, PIGR3, PIgR-3, Poly-Ig receptor 3

**Source**

Human OSCAR, His Tag(OSR-H52H3) is expressed from human 293 cells (HEK293). It contains AA Asp 19 - Asn 229 (Accession # [Q8IYS5-2](#) ).

Predicted N-terminus: Asp 19

**Molecular Characterization**

OSCAR(Asp 19 - Asn 229)  
Q8IYS5-2 Poly-his

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

The protein has a calculated MW of 25.0 kDa. The protein migrates as 33-43 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

>90% 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.*

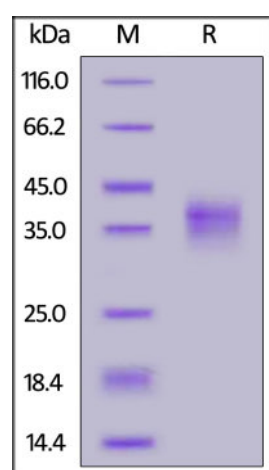
**Storage**

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

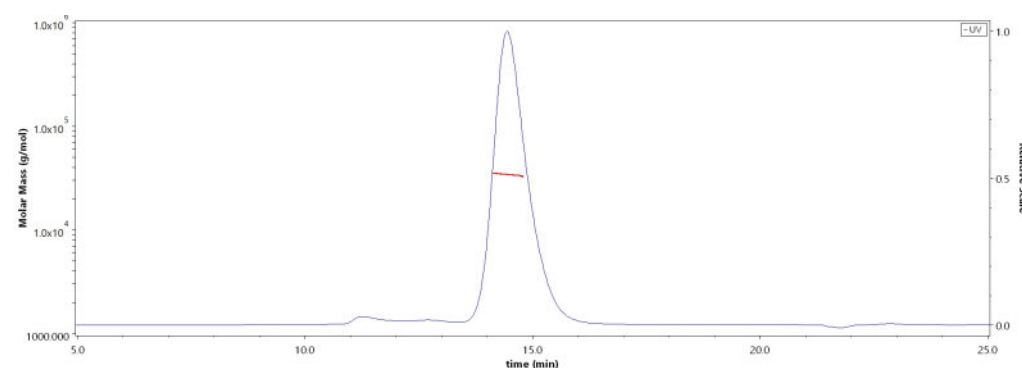
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

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

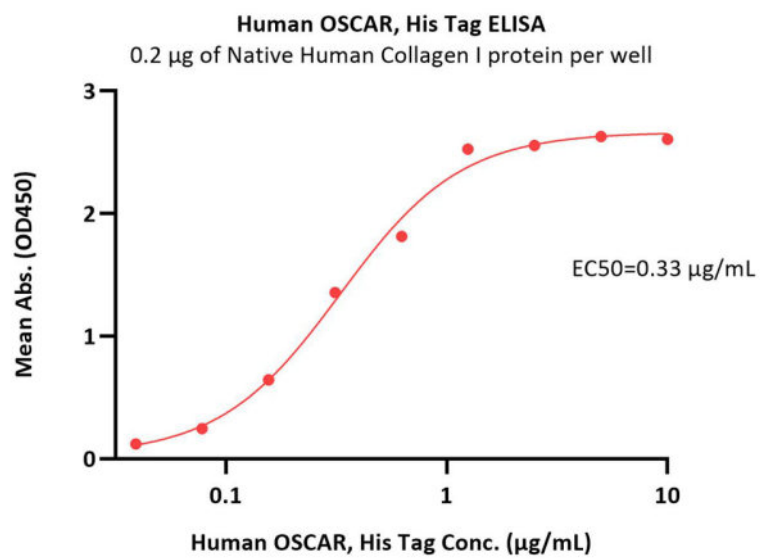
**SDS-PAGE**

Human OSCAR, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

**Bioactivity-ELISA****SEC-MALS**

The purity of Human OSCAR, His Tag (Cat. No. OSR-H52H3) is more than 90% and the molecular weight of this protein is around 27-40 kDa verified by SEC-MALS.

[Report](#)



Immobilized Native Human Collagen I protein at 2 µg/mL (100 µL/well) can bind Human OSCAR, His Tag (Cat. No. OSR-H52H3) with a linear range of 0.039-1.25 µg/mL (QC tested).

## Background

OSCAR (Osteoclast-associated immunoglobulin-like receptor), also known as PIgR-3 (polymeric immunoglobulin-like receptor), is a type I transmembrane protein of the leukocyte receptor complex (LRC) family. OSCAR is specifically expressed by pre-osteoclasts and signals via FcR gamma. OSCAR co-stimulates one of the major FcR gamma-associated pathways required for osteoclastogenesis in vivo. Collagen type I and collagen type II serve as ligands for OSCAR. OSCAR binds to specific motifs within fibrillary collagens in the extracellular matrix (ECM). OSCAR promoted osteoclastogenesis in vivo, and its binding to the collagen motif led to signaling that increased numbers of osteoclasts in culture. OSCAR contains two immunoglobulin-like domains, D1 and D2. Direct binding assays on OSCAR molecules showed that D2, but not D1, is critical for collagen binding. OSCAR may contribute to the pathogenesis and severity of a number of diseases including osteoporosis, atherosclerosis, chronic obstructive pulmonary disease and rheumatoid arthritis.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.