

For Research Use Only

Recombinant Human SIRP alpha/CD172a protein (His Tag)(HPLC verified)

Catalog Number: Eg0625



Basic Information

Species:
Human

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

Tag:
His Tag

Technical Specifications

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

Endotoxin Level:
<0.1 EU/μg protein, LAL method

Source:
HEK293-derived Human SIRP alpha protein Glu31-Arg370 (Accession# P78324-1) with a His tag at the C-terminus.

GeneID:
140885

Accession:
P78324-1

Predicted Molecular Mass:
41.7 kDa

SDS-PAGE:
50-70 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

SIRP Alpha, also known as CD172a or SHPS-1, is a transmembrane glycoprotein that belongs to the SIRP family. SIRP Alpha is a receptor with immunoreceptor tyrosine-based inhibition motifs in its cytoplasmic domain expressed by myeloid cells, including monocytes, macrophages, granulocytes, and a subset of dendritic cells. After activation of SIRP Alpha, Src homology 2 domain-containing protein tyrosine phosphatase-1 (SHP-1) is recruited and regulates receptor tyrosine kinase coupled signaling, participating in the regulation of phagocytosis and polarization of macrophages. SIRP Alpha binds to CD47, a receptor present on all cells (and frequently overexpressed in cancer cells), and this interaction provides a 'do-not-eat-me' signal to prevent phagocytosis.

References

1. Sarfati M, et al. (2008) Curr Drug Targets. 9(10):842-50.
2. Barclay AN, et al. (2014) Annu Rev Immunol. 32:25-50.
3. de Vos AF, et al. (2020) Nat Immunol. 21(6):601-603.
4. Shen Q, et al. (2022) Front Immunol. 13:865579.

Synonyms

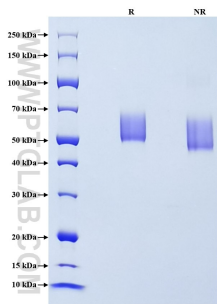
SIRP Alpha, SIRPA, BIT, Brain Ig-like molecule with tyrosine-based activation motifs, CD172 antigen-like family member A

For technical support and original validation data for this product please contact

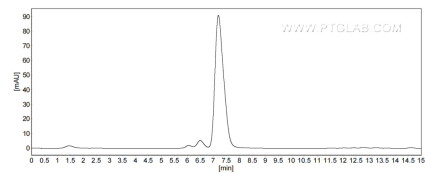
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Selected Validation Data



Purity of Recombinant Human SIRP alpha was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.



The purity of Human SIRP alpha/CD172a was greater than 90% as determined by SEC-HPLC.