

# Product Data Sheet

## SIRP alpha/CD172a Protein, Human (HEK293, Fc)

Cat. No.:	HY-P7406		
Synonyms:	rHuSignal regulatory protein $\alpha$ , Fc Chimera; CD172a; SHPS-1; BIT; MYD1		
Species:	Human		
Source:	HEK293		
Accession:	P78324 (E31-R370)		
Gene ID:	140885		
Molecular Weight:	85-100 kDa		

# Inhibitors • Screening Libraries • Proteins

### PROPERTIES

EEEELQVIQPDKSVLVAAGETATLRCTATSLIPVGPIQWFRGAGPGRELIYNQKEGHFPRVTTVSDLTKRNNMDFSIRIGNITPADAGTYYCVKFRKGSPDDVEFKSGAGTELSVRAKPSAPVVSGPAARATPQHTVSFTCESHGFSPRDITLKWFKNGNELSDFQTNVDPVGESVSYSIHSTAKVVLTREDVHSQVICEVAHVTLQGDPLRGTANLSETIRVPPTLEVTQQPVRAENQVNVTCQVRKFYPQRLQLTWLENGNVSRTETASTVTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSAHPKEQGSNTAAENTGSNERCQVEHDGQPAVSKSHDLKVSAppearanceLyophilized CD47, His, Human at 2.0 µg/mL (100 µL/well), can bind SIRPQ, hFC, Human with a linear range of 0.25-185.0ng/mL.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin LevelReconsititutionIt is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH20. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).Storage & StabilityStorage & StabilityStored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.Storage.ShippingRoom temperature in continental US; may vary elsewhere.Room temperature in continental US; may vary elsewhere.	AA Sequence							
ITPADAGTYYCVKFRKGSPDDVEFKSGAGTELSVRAKPSAPVVSGPAARATPQHTVSFTCESHGFSPRDITLKWFKNGNELSDFQTNVDPVGESVSYSIHSTAKVVLTREDVHSQVICEVAHVTLQGDPLRGTANLSETIRVPPTLEVTQQPVRAENQVNVTCQVRKFYPQRLQLTWLENGNVSRTETASTVTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSAHPKEQGSNTAAENTGSNERCQVEHDGQPAVSKSHDLKVSAppearanceLyophilized CD47, His, Human at 2.0 µg/mL (100 µl/well), can bind SIRPQ, hFc, Human with a linear range of 0.25-185.0ng/mL.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin Level<1 EU/µg, determined by LAL method.		EEELQVIQPD	KSVLVAAGET	ATLRCTATSL	IPVGPIQWFR			
PVVSGPAARATPQHTVSFTCESHGFSPRDITLKWFKNGNELSDFQTNVDPVGESVSYSIHSTAKVVLTREDVHSQVICEVAHVTLQGDPLRGTANLSETIRVPPTLEVTQQPVRAENQVNVTCQVRKFYPQRLQLTWLENGNVSRTETASTVTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSBiological ActivityImmobilized CD47, His, Human at 2.0 µg/mL (100 µl/well), can bind SIRPa, hFc, Human with a linear range of 0.25-185.0ng/mLrg/mLLyophilized powder.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin Level<1 EU/µg, determined by LAL method.		GAGPGRELIY	NQKEGHFPRV	TTVSDLTKRN	NMDFSIRIGN			
LSDFQTNVDPVGESVSYSIHSTAKVVLTREDVHSQVICEVAHVTLQGDPLRGTANLSETIRVPPTLEVTQQPVRAENQVNVTCQVRKFYPQRLQLTWLENGNVSRTETASTVTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSAHPKEQGSNTAAENTGSNERCQVEHDGQPAVSKSHDLKVSAppearanceLyophilized powder.Loophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin LevelFormulationLipophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH20. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).Storage & StabilityStorage & StabilityStored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		ΙΤΡΑΟΑGΤΥΥ	CVKFRKGSPD	DVEFKSGAGT	ELSVRAKPSA			
A H V T L Q G D P L V T C Q V R K F Y P V T C Q V R K F Y P Q R L Q L T W L E N G R L Q L T W L E N G N V S R T E T A S C Q V E H D G Q P A C Q V E H D G Q P A V S K S H D L K V S A H P K E Q G S N T A A E N T G S N E RR V P P T L E V T Q G N V S R T E T A S C Q V E H D G Q P A V S K S H D L K V S V S K S H D L K V S A H P K E Q G S N T A A E N T G S N E RR V P P T L E V T Q G N V S R T E T A S C Q V E H D G Q P A V S K S H D L K V S V S K S H D L K V S A A E N T G S N E RBiological ActivityImmobilized CD47, His, Human at 2.0 µg/mL (100 µl/well), can bind SIRPα, hFc, Human with a linear range of 0.25-185.0 ng/mL.AppearanceLyophilized powder.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin Level<1 EU/µg, determined by LAL method.ReconsititutionIt is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).Storage & StabilityStored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		P V V S G P A A R A	ТРQНТVSFTC	ESHGFSPRDI	TLKWFKNGNE			
VT C Q V R K F Y P NWM SW L L V N V A H P K E Q G S N TQ R L Q L T W L E N G N V S R T E T A S C Q V E H D G Q P A V S K S H D L K V S A H P K E Q G S N T A A E N T G S N E RT V T E N K D G T Y N W M S W L L V N V A A E N T G S N E RBiological ActivityImmobilized CD47, His, Human at 2.0 µg/mL (100 µl/well), can bind SIRPQ, hFc, Human with a linear range of 0.25-185.0 ng/mL.AppearanceLyophilized powder.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin Level<1 EU/µg, determined by LAL method.ReconsititutionIt is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH20. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).Storage & StabilityStored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		LSDFQTNVDP	VGESVSYSIH	STAKVVLTRE	DVHSQVICEV			
NWMSWLLVNV AHPKEQGSNTSAHRDDVKLT CQVEHDGQPA VSKSHDLKVS AHPKEQGSNT AAENTGSNERCQVEHDGQPA VSKSHDLKVS VSKSHDLKVS AHPKEQGSNT SRPA, hFc, Human with a linear range of 0.25-185.0 ng/mL.Biological ActivityImmobilized CD47, His, Human at 2.0 µg/mL (100 µl/well), can bind SIRPA, hFc, Human with a linear range of 0.25-185.0 ng/mL.AppearanceLyophilized powder.FormulationLyophilized from a 0.2 µm filtered solution of PBS or PBS, 5% trehalose and mannitol.Endotoxin Level<1 EU/µg, determined by LAL method.ReconsititutionIt is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH20. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).Storage & StabilityStored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		AHVTLQGDPL	RGTANLSETI	RVPPTLEVTQ	QPVRAENQVN			
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### DESCRIPTION

Signal regulatory protein  $\alpha$  (SIRP $\alpha$ ) is a glycoprotein receptor that recruits and signals via the tyrosine phosphatases SHP-1 and SHP-2. The cytoplasmic domain of SIRP $\alpha$  contains four immunoreceptor tyrosine-based inhibition motifs (ITIMs), which upon phosphorylation recruit and activate SH2-domain-containing phosphotyrosine phosphatases (PTPase) SHP-1 and SHP-2. In macrophages SIRP $\alpha$  can negatively regulate the phagocytosis of host cells and the production of tumor necrosis factor alpha. SIRP $\alpha$  ligation induces macrophage NO production through the cooperative action of JAK/STAT and PI3-K/Rac1/NOX/H2O2 signaling pathways. It proposes that SIRP $\alpha$  may function as an inhibitory receptor<sup>[1]</sup>.

### REFERENCES

[1]. Alblas J, et al. Signal regulatory protein alpha ligation induces macrophage nitric oxide production through JAK/STAT- and phosphatidylinositol 3-kinase/Rac1/NAPDH oxidase/H2O2-dependent pathways. Mol Cell Biol. 2005 Aug;25(16):7181-92.

### Caution: Product has not been fully validated for medical applications. For research use only.

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