

SIRP alpha/CD172a Protein, Mouse (BAA20376, HEK293, Fc)

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| Cat. No.: | HY-P76071 |
| Synonyms: | Signal-regulatory protein alpha; CD172a; SIRP alpha; SIRPA; MFR; SHPS1; SIRP |
| Species: | Mouse |
| Source: | HEK293 |
| Accession: | BAA20376.1 (T32-N373) |
| Gene ID: | 19261 |
| Molecular Weight: | approximately 100-120 kDa |

PROPERTIES

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| Biological Activity | Measured by its binding ability in a functional ELISA. Immobilized rat CD47-His at 10 µg/mL (100 µl/well) can bind mouse SIRPA-Fc, The EC ₅₀ of mouse SIRPA-Fc is 0.6-1.4 µg/mL. |
| Appearance | Lyophilized powder. |
| Formulation | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| Endotoxin Level | <1 EU/µg, determined by LAL method. |
| Reconstitution | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. |
| Storage & Stability | Stored 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. |
| Shipping | Room temperature in continental US; may vary elsewhere. |

DESCRIPTION

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| Background | SIRP alpha/CD172a Protein functions as an immunoglobulin-like cell surface receptor for CD47, facilitating the translocation of PTPN6, PTPN11, and other binding partners from the cytosol to the plasma membrane. This receptor plays a crucial role in various cellular processes, including supporting adhesion of cerebellar neurons, promoting neurite outgrowth, and facilitating glial cell attachment. Additionally, SIRP alpha/CD172a is implicated in intracellular signaling during synaptogenesis and synaptic function. Its negative regulatory role extends to receptor tyrosine kinase-coupled responses induced by cell adhesion, growth factors, or insulin. Furthermore, SIRP alpha/CD172a participates in the negative modulation of phagocytosis, mast cell activation, and dendritic cell activation, with CD47 binding preventing dendritic cell maturation and inhibiting cytokine production. Notably, it contributes to antiviral immunity by limiting new world arenavirus infection, specifically by decreasing virus internalization. The receptor also interacts with THBS1, participating in ROS signaling in non-phagocytic cells and stimulating NADPH oxidase-derived ROS production. SIRP alpha/CD172a engages in diverse protein interactions, including binding to PTPN11, GRB2, FGR, JAK2, SCAP1, SCAP2, FYB1, PTK2B, and TRIM2. |
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Caution: Product has not been fully validated for medical applications. For research use only.

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