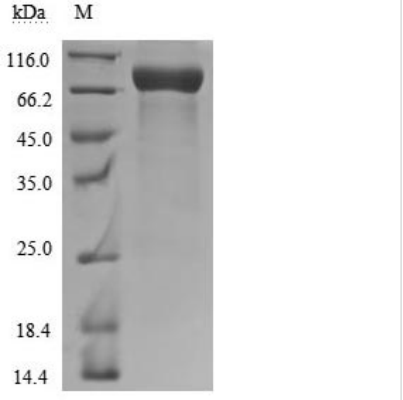
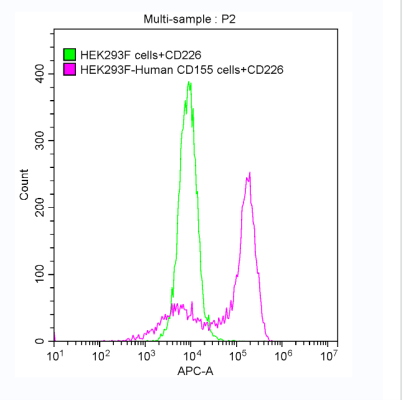
Recombinant Human CD226 antigen (CD226), partial (Active)

Product Code	CSB-MP618996HU
Abbreviation	Recombinant Human CD226 protein, partial (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q15762
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Biological Activity	FACS assay shows that Human CD226 can bind to 293F cell overexpressing human CD155.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	EEVLWHTSVPFAENMSLECVYPSMGILTQVEWFKIGTQQDSIAIFSPTHGMVIR KPYAERVYFLNSTMASNNMTLFFRNASEDDVGYYSCSLYTYPQGTWQKVIQV VQSDSFEAAVPSNSHIVSEPGKNVTLTCQPQMTWPVQAVRWEKIQPRQIDLLT YCNLVHGRNFTSKFPRQIVSNCSHGRWSVIVIPDVTVSDSGLYRCYLQASAGE NETFVMRLTVAEGKTDN
Source	Mammalian cell
Target Names	CD226
Expression Region	19-247aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal hFc1-Myc-tagged
Mol. Weight	56.1
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
FACS assay shows that Human CD226 can bind to 293F cell overexpressing human CD155.

Description

The recombinant human CD226 protein is generated by expressing the plasmid containing the gene fragment encoding amino acids 19-247 of the human CD226 in mammalian cells. The CD226 protein carries a C-terminal hFc-Myc tag. According to SDS-PAGE analysis, the CD226 protein's purity surpasses 90%. Its endotoxin levels are measured below 1.0 EU/μg by the LAL assay. It is validated as an active protein. The FACS assay shows that this human CD226 can bind to 293F cells overexpressing human CD155.

Human CD226 antigen (DNAX-1 or PTA1) is a transmembrane glycoprotein that plays a crucial role in the immune response. It is primarily expressed on various immune cells, including NK cells, T cells (both CD4+ and CD8+), monocytes, and platelets [1][2][3]. CD226 is a member of the immunoglobulin superfamily and is characterized by two immunoglobulin V-like domains, a transmembrane domain, and an intracellular signaling domain [3][4].

CD226 mainly acts as an activating receptor that enhances immune responses. It interacts with its ligands, CD155 (the poliovirus receptor) and CD112, which are expressed on antigen-presenting cells (APCs) and various other cell types [5][6]. This interaction is essential for the activation and proliferation of T cells, particularly in the context of Th1 cell differentiation and the production of pro-inflammatory cytokines such as IL-17 and IFN-γ [7][8]. CD226 signaling is also involved in the cytotoxic activity of NK cells, facilitating their ability to recognize and kill tumor cells [9][10].

Moreover, CD226 plays a significant role in immune checkpoint regulation,

particularly in the context of tumor immunity. It competes with inhibitory receptors such as TIGIT and CD96 for binding to CD155 and CD112, thereby modulating the balance between activating and inhibitory signals in T cells [7][10]. This competitive interaction is critical for maintaining effective anti-tumor responses, as evidenced by studies showing that tumor cells can evade immune detection by inducing the degradation of CD226 through CD155 interactions [9][10]. CD226 has also been implicated in various autoimmune diseases and conditions. Genetic variations in the CD226 gene have been associated with susceptibility to multiple sclerosis and type 1 diabetes [11].

References:

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Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.