abcam

ab33393

Biotin Anti-CD226 antibody [DX11]

Anti-CD226 antibody [DX11] conjugated to Biotin - suitable for flow cytometry, and reacts with human samples. Clone [DX11] is a mouse monoclonal antibody cited in 47 publications.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	Biotin
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD226 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q15762
Clone number	DX11
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	1/1 - 1/10

Notes	Use 10µl of the suggested working dilution to label 1 x 10^6 cells in 100µl.

Target data

See full target information CD226

Function	Cell surface receptor that plays an important role in the immune system, particularly in intercellular adhesion, lymphocyte signaling, cytotoxicity and lymphokine secretion mediated by cytotoxic T-cells and NK cells (PubMed:8673704, PubMed:9712030). Functions as a costimulatory receptor upon recognition of target cells, such as virus-infected or tumor cells. Upon binding to its ligands PVR/CD155 or NECTIN2/CD112 on target cells, promotes the cytotoxic activity of NK cells and CTLs, enhancing their ability to kill these cells (PubMed:26755705, PubMed:31253644, PubMed:30591568). Mechanistically, phosphorylation by Src kinases such as LYN of FYN, enables binding to adapter GRB2, leading to activation of VAV1, PI3K and PLCG1. Promotes also activation of kinases ERK and AKT, as well as calcium fluxes (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Notes

This antibody has been reported to inhibit T- and NK cell mediated cytotoxicity against tumour cell targets and to block TNF alpha and IFN gamma secretion by alloantigen-specific T-cells.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD226 also known as DNAM-1 (DNAX Accessory Molecule-1) is a transmembrane protein expressed on the surface of various immune cells such as T cells natural

	killer (NK) cells and some B cells. The protein has a molecular weight of approximately 65 kDa. CD226 is part of the Ig superfamily and plays a role in the adhesion and signaling processes of immune cells. It interacts with its ligands CD112 (PVRL2) and CD155 (PVR) on target cells facilitating immune synapse formation and cytotoxic activity.
Biological function summary	CD226 is involved in immune cell activation and receptor-mediated signaling. It aids the recognition and destruction of target cells by NK cells and cytotoxic T lymphocytes through its interaction with ligand-expressing cells. CD226 does not work alone but functions as part of a complex system of co-stimulatory and inhibitory receptors balancing immune responses. Its cooperation with receptors such as CD96 and TIGIT (T cell immunoreceptor with Ig and ITIM domains) modulates the activity of immune effector cells.
Pathways	CD226 takes part in immune signaling pathways that regulate cell-mediated cytotoxicity and inflammation. It is an important component of the immune checkpoint axis interacting closely with proteins like CD96 and TIGIT within these pathways. This interaction helps determine the fate of immune responses influencing the progression or resolution of inflammatory and autoimmune conditions. CD226 plays a role in the NK cell-mediated cytotoxicity pathway and the adaptive immune response.
Associated diseases and disorders	CD226 has been linked to autoimmune diseases such as multiple sclerosis and type 1 diabetes. Abnormal expression or function of CD226 can influence the pathogenesis of these conditions often through interactions with related proteins like TIGIT impacting immune tolerance and effector cell function. CD226's involvement in regulating immune responses highlights its importance as a potential therapeutic target in managing autoimmune and other immune-related disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.