CD79A Protein, Mouse (HEK293, Fc)

Cat. No.:	HY-P75383
Synonyms:	B-cell antigen receptor complex-associated protein alpha chain; CD79a; IGA; MB1
Species:	Mouse
Source:	HEK293
Accession:	P11911 (L29-R137)
Gene ID:	12518
Molecular Weight:	Approximately 39 kDa

PROPERTIES

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.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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

Background	CD79A, in collaboration with CD79B, plays a pivotal role in initiating the signal transduction cascade triggered by antigen binding to the B-cell antigen receptor complex (BCR), resulting in the internalization of the complex, trafficking to late endosomes, and subsequent antigen presentation. This indispensable protein is also crucial for BCR surface expression and the efficient differentiation of pro- and pre-B-cells. CD79A not only stimulates SYK autophosphorylation and activation but also binds to BLNK, facilitating the proximity of BLNK to SYK and enabling the phosphorylation of BLNK. Additionally, it interacts with and enhances the activity of specific Src-family tyrosine kinases, including FYN and LYN. In the context of immature B-cell development, CD79A functions to repress BCR signaling. As a heterodimer of alpha and beta chains, CD79A forms a disulfide-linked complex within the B-cell antigen receptor, where the alpha/beta chain heterodimer non-covalently associates with an antigen-specific membrane-bound surface immunoglobulin composed of two heavy chains and two light chains. The interaction through its phosphorylated ITAM domain with the SH2 domains of SYK stimulates SYK autophosphorylation and activation. Furthermore, when phosphorylated on Tyr-204, CD79A interacts with the SH2 domain of BLNK/SLP65, bringing BLNK into proximity with SYK and facilitating the phosphorylation of BLNK, a critical step for the trafficking of the BCR to late endosomes. CD79A's versatile interactions contribute to the intricate regulation of B-cell signaling and function.

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

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