

CD79 Protein, Human (HEK293, Flag-His)

Cat. No.:	HY-P75386
Synonyms:	B-cell antigen receptor complex-associated protein; CD79a; IGA; MB1; CD79b; IGB
Species:	Human
Source:	HEK293
Accession:	P11912 (L33-R143)&P40259 (A29-D159)
Gene ID:	973&974
Molecular Weight:	Approximately 37.5 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.
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

Background	<p>The CD79A protein is essential for the initiation of the signal transduction cascade in response to antigen binding to the B-cell antigen receptor complex (BCR). It plays a crucial role in internalizing the BCR complex, trafficking it to late endosomes, and facilitating antigen presentation. CD79A is also necessary for the surface expression of the BCR and efficient differentiation of pro- and pre-B-cells. It promotes the autophosphorylation and activation of SYK, a key signaling molecule, by binding to BLNK and bringing it into proximity with SYK, allowing for the phosphorylation of BLNK. CD79A also interacts with certain Src-family tyrosine kinases, such as FYN and LYN, increasing their activity. Notably, it represses BCR signaling during the development of immature B-cells. CD79A forms a disulfide-linked heterodimer with CD79B, and together they constitute the B-cell antigen receptor complex, where the alpha/beta chain heterodimer is non-covalently associated with an antigen-specific membrane-bound surface immunoglobulin composed of two heavy chains and two light chains. CD79A interacts with SYK through its phosphorylated ITAM domain, facilitating SYK autophosphorylation and activation. Additionally, when phosphorylated on Tyr-210, CD79A interacts with the SH2 domain of BLNK/SLP65, bringing BLNK into proximity with SYK and allowing SYK to phosphorylate BLNK, which is necessary for the trafficking of the BCR to late endosomes.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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