CD1B-B2M Heterodimer Protein, Rhesus Macaque (HEK293, His)

Cat. No.:	HY-P76209
Synonyms:	T-cell surface glycoprotein CD1b; CD1B; Beta-2-microglobulin; B2M
Species:	Rhesus Macaque
Source:	HEK293
Accession:	NP_001139006 (E19-S303)&NP_001040602 (I21-M119)
Gene ID:	718955&712428
Molecular Weight:	Approximately 38-45 & 12 kDa due to the glycosylation.

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Rhesus Macaque CD1B-B2M Heterodimer at 2 μg/mL (100 μL/well) can bind Anti-CD1B Antibody, The ED_{50} for this effect is 1.538 μg/mL .
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	CD1B belongs to Group 1 of the transmembrane glycoprotein CD1 family. The CD1 molecule is expressed on the surface of many different human antigen-presenting cells (DC, monocytes, and some thymus cells). The CD1B protein, as a key antigen-presenting molecule, has shown the ability to bind both self and non-self lipid and glycolipid antigens, thereby facilitating their presentation to T cell receptors on natural killer T cells. This protein forms a heterodimer complex with B2M (beta-2 microglobulin), which plays a crucial role in immune surveillance and response. Its interaction with saponin C further enhances its functional library, helping T cells to recognize and activate the complex process of various antigens. CD1B is a potential prognostic biomarker associated with tumor mutation burden and promotes antitumor immunity in lung adenocarcinoma[1][2][3].

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

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