

CD6 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P72922
Synonyms:	T-cell differentiation antigen CD6; T12; TP120; CD6
Species:	Human
Source:	HEK293
Accession:	P30203 (H18-E398)
Gene ID:	923
Molecular Weight:	Approximately 67.3 kDa

PROPERTIES

AA Sequence	<pre> MWLFFGITGL LTAALSGHPS PAPPDQLNTS SAESELWEPG ERLPVRLTNG SSSCSGTVEV RLEASWEPAC GALWDSRAAE AVCRALGCGG AEAASQLAPP TPELPPPPAA GNTSVAANAT LAGAPALLCS GAEWRLCEVV EHACRSDGRR ARVTCAENRA LRLVDGGGAC AGRVEMLEHG EWGSVCDDTW DLEDAHVVCR QLGCGWAVQA LPGLHFPTGR GPIHRDQVNC SGAEAYLWDC PGLPGQHYCG HKEDAGAVCS EHQSWRLTGG ADRCEGQVEV HFRGVWNTVC DSEWYPSEAK VLCQSLGCGT AVERPKGLPH SLSGRMYYS NGEELTLSNC SWRFNNSNLC SQSLAARVLC SASRSLHNLS TPEVPASVQT VTIESSVTVK IENKESRE </pre>
Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells. When 8×10^4 cells/well are added to CD6-Fc coated plates (5 $\mu\text{g}/\text{mL}$ and 100 $\mu\text{L}/\text{well}$) in the presence of 10 $\mu\text{g}/\text{ml}$ PHA, approximately > 50% cells will adhere specifically after 60 minutes at 37°C.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/ μg , determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background

CD6 protein, a pivotal cell adhesion molecule, plays a central role in mediating cell-cell contacts and orchestrating T-cell responses through its interaction with ALCAM/CD166. This interaction is crucial for regulating T-cell activation and proliferation, contributing to the formation and maturation of the immunological synapse. Beyond its role in T-cell responses, CD6 functions as a calcium-dependent pattern receptor, binding and aggregating both Gram-positive and Gram-negative bacteria, with downstream activation of signaling cascades and MAP kinases in response to lipopolysaccharide (LPS) from Gram-negative bacteria. CD6's involvement in the inflammatory response includes mediating the secretion of pro-inflammatory cytokines upon LPS stimulation. CD6 interacts with various proteins, including the TCR/CD3 complex subunit CD3E, LCP2, VAV1, and glycosylated extracellular domains of LGALS1 and LGALS3. Notably, interactions with LGALS1 or LGALS3 inhibit the binding of CD6 to ALCAM, providing further insight into the intricate regulatory mechanisms of CD6-mediated cellular functions.

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

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