

# **Screening Libraries**

**Proteins** 

# **Product** Data Sheet

# CTLA-4 Protein, Human (HEK293, Fc)

Cat. No.: HY-P70001

Synonyms: rHuCytotoxic T-lymphocyte protein 4/CTLA-4, Fc; Cytotoxic T-lymphocyte protein 4; Cytotoxic T-

lymphocyte-associated antigen 4; CTLA4; CD152

Human Species: Source: **HEK293** 

Accession: P16410 (K36-D161)

Gene ID: 1493

Molecular Weight: Approximately 50-58 kDa

## **PROPERTIES**

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$\Lambda \Lambda$	Sea	IIIΔN	60

KAMHVAQPAV VLASSRGIAS FVCEYASPGK ATEVRVTVLR QADSQVTEVC AATYMMGNEL TFLDDSICTG TSSGNQVNLT IQGLRAMDTG LYICKVELMY PPPYYLGIGN GTQIYVIDPE

PCPDSD

**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<sub>2</sub>O. 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

GMP CTLA-4, a pivotal inhibitory receptor, emerges as a principal negative regulator orchestrating T-cell responses within the intricate framework of immune modulation. This regulatory function stems from the distinctive property of GMP CTLA-4, displaying significantly heightened affinity for its natural B7 family ligands, CD80 and CD86, compared to the cognate stimulatory coreceptor CD28. This pronounced difference in binding affinity positions GMP CTLA-4 to competitively engage with CD80/B7-1 and CD86/B7.2, exerting a suppressive influence on T-cell activation and finely tuning immune responses. The homodimeric structure of GMP CTLA-4, intricately linked by disulfide bonds, further underscores its role as a molecular sentinel in immune regulation. Additionally, GMP CTLA-4 interacts with ICOSLG, contributing to its multifaceted engagement in immune checkpoint pathways.

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