

## 32-20643: Recombinant Human B7-1 Fc(Discontinued)

**Alternative Name :** B7, BB1, CD80

### Description

#### Source:CHO cells

B7-1 and B7-2 are transmembrane glycoproteins of the immunoglobulin superfamily that are expressed, along with the receptors CD28 and CTLA-4, by antigen-presenting cells, and along with these receptors, constitute crucial co-stimulatory pathways for T and B cell regulatory responses. As members of the B7 family, B7-1 and B7-2 play principal roles in immunity, activating immune response and maintaining immune tolerance through engagement with CD28 and CTLA-4. Co-stimulatory signals generated by B7-1 and B7-2 interactions with CD28 serve to stimulate T cell activation and prevent anergy through the amplification of T cell receptor (TCR) signaling. In contrast, interactions of the ligands with CTLA-4 serves to maintain T cell homeostasis and self-tolerance through the disruption of stimulatory signaling from B7 isoform bound CD28 complexes, and by inducing powerful inhibitory signals in T cells. B7-1 plays an important role in immune response through its amplification and regulation of T cell activity at peripheral inflammation sites. B7-1, like CTLA-4, is, however, only poorly expressed on resting dendritic cells, and its up-regulation is, therefore, considerably delayed upon immune activation. Conversely, B7-2 and CD28 are constitutively expressed by resting hematopoietic and T cells, respectively, and as a result are able to rapidly induce up-regulation upon immune activation, making them critical to the early co-stimulatory signaling of immune response. Both B7-1 and B7-2 have been shown to demonstrate co-stimulatory activity in T cell proliferation in vitro and elicit enhanced antitumor immune response in vivo. Recombinant Human B7-1Fc is a homodimeric B7-1 fusion protein, whose monomer contains a total of 441 amino acid residues, consisting of 211 amino acid residues corresponding to the extracellular domain of human B7-1, fused to the Fc portion of human IgG1. The calculated molecular weight of the B7-1 Fc monomer is 50.0 kDa.

### Product Info

**Amount :** 20 µg / 100 µg

**Purification :** Purity: >= 95% by SDS-PAGE gel and HPLC analyses.

**Content :** This recombinant protein is supplied in lyophilized form.

**Amino Acid :** VIHVTKEVKE VATLSCGHNV SVEELAQTRI YWQKEKKMVL TMMSGDMNIW PEYKNRTIFD  
ITNNLSIVIL ALRPSDEGT ECVVLKYEKD AFKREHLAEV TLSVKADFPT PSISDFEIPT  
SNIRRIICST SGGFPEPHLS WLENGEELNA INTTVSQDPE TELYAVSSKL DFNMTTNHSF  
MCLIKYGHRL VNQTFNWNTT KQEHFPDNGG PKSCDKTHTC PPCPAPELLG GPSVFLFPPK  
PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY NSTYRVVSVL  
TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP QVYTLPPSRD ELTKNQVSLT  
CLVKGFYPSD IAVEWESNGQ PENNYKTPPP VLDSGGSFLL YSKLTVDKSR WQQGNVFSCS  
VMHEALHNHY TQKSLSLSPG K

### Application Note

Determined by its ability to inhibit alkaline phosphatase activity in differentiating MC3T3/E1 cells. The expected  $ED_{50}$  for this effect is 0.5-1.5 µg/ml.