

**Anti-CD28 Reference Antibody (Theralizumab)  
Recombinant Antibody  
Catalog # APR10315****Specification****Anti-CD28 Reference Antibody (Theralizumab) - Product Information**

Application	FC, Kinetics, Animal Model
Primary Accession	<a href="#">P10747</a>
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG4
Calculated MW	146.22 KDa

**Anti-CD28 Reference Antibody (Theralizumab) - Additional Information****Target/Specificity**  
CD28**Endotoxin**  
< 0.001EU/ µg,determined by LAL method.**Conjugation**  
Unconjugated**Expression system**  
CHO Cell**Format**  
Purified monoclonal antibody supplied in PBS, pH6.0, without preservative.This antibody is purified through a protein A column.**Anti-CD28 Reference Antibody (Theralizumab) - Protein Information****Name** CD28**Function**  
Receptor that plays a role in T-cell activation, proliferation, survival and the maintenance of immune homeostasis (PubMed:<a href="http://www.uniprot.org/citations/1650475" target="\_blank">1650475</a>, PubMed:<a href="http://www.uniprot.org/citations/7568038" target="\_blank">7568038</a>). Functions not only as an amplifier of TCR signals but delivers unique signals that control intracellular biochemical events that alter the gene expression program of T-cells (PubMed:<a href="http://www.uniprot.org/citations/24665965" target="\_blank">24665965</a>). Stimulation upon engagement of its cognate ligands CD80 or CD86 increases proliferation and expression of various cytokines in particular IL2 production in both CD4(+) and CD8(+) T-cell subsets (PubMed:<a href="http://www.uniprot.org/citations/1650475" target="\_blank">1650475</a>, PubMed:<a href="http://www.uniprot.org/citations/35397202" target="\_blank">35397202</a>). Mechanistically, ligation induces recruitment of protein kinase C-theta/PRKCQ and GRB2 leading to

NF-kappa-B activation via both PI3K/Akt-dependent and -independent pathways (PubMed:<a href="http://www.uniprot.org/citations/21964608" target="\_blank">21964608</a>, PubMed:<a href="http://www.uniprot.org/citations/24665965" target="\_blank">24665965</a>, PubMed:<a href="http://www.uniprot.org/citations/7568038" target="\_blank">7568038</a>). In conjunction with TCR/CD3 ligation and CD40L costimulation, enhances the production of IL4 and IL10 in T-cells (PubMed:<a href="http://www.uniprot.org/citations/8617933" target="\_blank">8617933</a>).

#### Cellular Location

Cell membrane; Single-pass type I membrane protein

#### Tissue Location

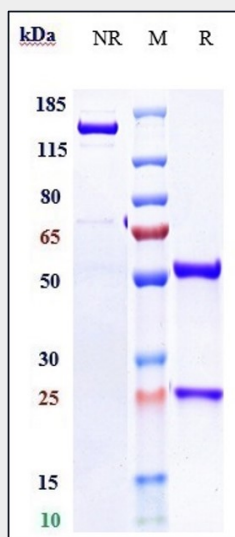
Expressed in T-cells and plasma cells, but not in less mature B-cells

### Anti-CD28 Reference Antibody (Theralizumab) - Protocols

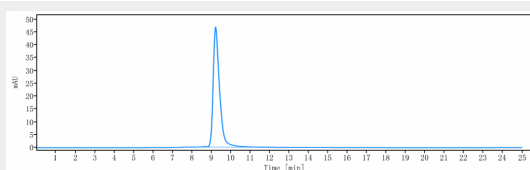
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-CD28 Reference Antibody (Theralizumab) - Images



Anti-CD28 Reference Antibody (Theralizumab) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%



The purity of Anti-CD28 Reference Antibody (Theralizumab) is more than 98.72% ,determined by SEC-HPLC.