

## CD40 recombinant antibody

Anti-CD40 [5D12]

| CATALOG # | REACTIVITY                         | APPLICATIONS                                                                       |
|-----------|------------------------------------|------------------------------------------------------------------------------------|
| AAA72004  | Cynomolgus, Marmoset Monkey, Human | Immunohistochemistry, Immunoprecipitation, Flow Cytometry, Functional Assay, ELISA |

### PRODUCT SYNONYMS

CD40; Monoclonal Recombinant Antibody; Anti-CD40 [5D12]; Tumor necrosis factor receptor superfamily member 5; B-cell surface antigen CD40; Bp50; CD40L receptor; CDw40; CD40 recombinant antibody

### PRODUCT SPECIFICATIONS

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                                            | Cynomolgus, Marmoset Monkey, Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Clonality                                             | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Isotype                                               | Human IgG4, Kappa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Clone Number                                          | 5D12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Specificity                                           | ch5D12 binds specifically to recombinant and native human CD40 ectodomain and has been shown to also bind CD40 in cynomolgus and marmoset monkeys. The antibody requires residues within D1 and D1/B2 for binding (Hager et al, 2003) (D1 domain is crucial for CD40L binding). Binding characteristics are very similar between humanized ch5D12 and mu5D12. CD40 is a glycoprotein of the TNFR superfamily and is expressed on all mature B cells, dendritic cells, activated monocytes, some endothelial cells and some epithelium including the thymus. CD40 binds to CD40L, and this interaction is involved in B-cell activation and proliferation, antigen-presenting cell (APC) activation, initiation of antigen-specific T-cell responses, immunoglobulin production, activation of effector macrophages isotype switching, homotypic adhesion and rescue from apoptosis. |
| Purity/Purification                                   | Protein A Affinity Purified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Concentration                                         | 1 mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Sequence Length                                       | 277                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicable Applications for CD40 recombinant antibody | IHC (Immunohistochemistry), IP (Immunoprecipitation), FCM/FACS (Flow Cytometry), ELISA, Blocking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Immunogen                                             | Anti-CD40 mAb 5D12, was generated by immunizing mice with sf9 insect cells expressing recombinant human CD40 and selected for the ability to bind EBV-immortalized human B cells. The variable regions from mu5D12 were cloned and used to construct chimeric humanized IgG4 5D12.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Buffer Composition                                    | PBS only with 0.02% Proclin 300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Note                                                  | Describes the creation of a chimeric human IgG4 version of mu5D12 to enhance the in vivo half-life and reduce the immunogenicity of the antibody capable of antagonising the CD40-CD40L interaction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Preparation and Storage                               | Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### ADDITIONAL INFORMATION

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| Related Product Information for CD40 recombinant antibody | Recombinant monoclonal antibody to CD40. Manufactured using a proprietary Recombinant Platform with variable regions (i.e. specificity) from the hybridoma 5D12.<br>Anti-CD40 mAb 5D12, was generated by immunizing mice with sf9 insect cells expressing recombinant human CD40 and selected for the ability to bind EBV-immortalized human B cells. The variable regions from mu5D12 were cloned and used to construct chimeric humanized IgG4 5D12. |
| Product Categories/Family for CD40 recombinant antibody   | <a href="#">Chronic Inflammatory Autoimmune Diseases</a> ; <a href="#">Transplantation Rejection</a> ; <a href="#">EAE</a> ; <a href="#">Experimental Autoimmune Encephalomyelitis</a> ; <a href="#">Multiple Sclerosis</a> ; <a href="#">Inflammation</a> ; <a href="#">Humanized Antibody</a>                                                                                                                                                        |

|            |                                                                                                                                     |
|------------|-------------------------------------------------------------------------------------------------------------------------------------|
| References | Boon et al. Preclinical assessment of anti-CD40 Mab 5D12 in cynomolgus monkeys Toxicology. 2002 May 15; 174(1):53-65. PMID:11972992 |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| NCBI GI #                        | 4507581                                                        |
| NCBI GeneID                      | 958                                                            |
| NCBI Accession #                 | NP_001241.1                                                    |
| NCBI GenBank Nucleotide #        | NM_001250.5                                                    |
| UniProt Accession #              | P25942; Q53GN5; Q5JY15; Q5U007; Q7M4Q8; Q86YK5; Q9BYU0; E1P5S9 |
| NCBI Official Full Name          | tumor necrosis factor receptor superfamily member 5 isoform 1  |
| NCBI Official Synonym Full Names | CD40 molecule                                                  |
| NCBI Official Symbol             | CD40                                                           |
| NCBI Official Synonym Symbols    | p50; Bp50; CDW40; TNFRSF5                                      |
| NCBI Protein Information         | tumor necrosis factor receptor superfamily member 5            |
| UniProt Protein Name             | Tumor necrosis factor receptor superfamily member 5            |
| UniProt Gene Name                | CD40                                                           |
| UniProt Synonym Gene Names       | TNFRSF5                                                        |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/cd40-recombinant-antibody-clone-5d12-immunohistochemistry-immunoprecipitation-flow-cytometry-elisa/72004>