Anti-PSMA-Anti-CD3 IgG format Bispecific Antibody

Catalog: 101242

Lot: 211109

Product Information

Description:

Anti-PSMA-Anti-CD3 IgG format bispecific antibody is a purified recombinant human bispecific antibody with T cell Engager. This bispecific antibody has been tested for specific activity in the functional reporter assay using NFAT-luc reporter Jurkat cell line (BPS Bioscience #60621) in the presence of PSMA-CHO cells (BPS Bioscience #79641-H).

PSMA (Prostate-Specific Membrane antigen), also known as FOLH1 (folate hydrolase 1) and NAALADase I (N-acetyl-L-aspartyl-L-glutamate peptidase I) is a transmembrane protein highly expressed in the intestine, the prostate, and the nervous system. The protein is a glutamate carboxypeptidase involved in folate metabolism and may be involved in pathological conditions such as hyperhomocysteinemia (intestine) and glutamate toxicity (nervous system).

PSMA is overexpressed in prostate cancer cells and is the target of an increasing number of diagnostic and therapeutic approaches used for the treatment of prostate cancer.

Construct:	Anti-PSMA-Heavy and Light Chains, Anti CD3-Heavy and Light Chains
Concentration:	5.8 mg/ml
Species:	Human
Formulated In:	8 mM phosphate, 110 mM NaCl, 2.2 mM KCl, pH 7.4, and 20% glycerol
Expression System:	Co-expressed in HEK293
Purification:	Protein A affinity purification of the IgG-tag protein from HEK293 cells.
Format:	Aqueous buffer solution
Stability:	At least 12 months at -80°C. Avoid freeze/thaw cycles.
Storage:	-80°C
MW:	~150 kDa (Heavy Chain: 50 kDa; Light Chain: 24 kDa)
Purity:	≥90%
Assay Conditions:	*Experimental design and assay protocol used for measuring anti PSMA-anti CD3 functional activity using NFAT-luc reporter Jurkat cell line:*

Jurkat effector cells expressing endogenous TCR/CD3 and transfected with the luciferase reporter gene under the control of NFAT (Nuclear Factor of Activator T cells; BPS Bioscience #60621) were incubated with increasing concentrations of anti-PSMA x anti-CD3 bispecific antibody in the presence of PSMA-CHO cells (BPS Bioscience #79641-H) or control CHO cells (ATCC #CCL-61™).

Protocol:

1. CHO and PSMA-CHO cells were seeded at 30,000 cells/well and allowed a few hours for the cells to attach in a 96-well clear bottom white plate.
2. NFAT-luc reporter Jurkat cells were seeded at 30,000 cells/well in co-culture with CHO and PSMA-CHO cells
3. The bispecific antibody was diluted (range of 100 fM-100 nM) and added to the cells. The bispecific antibody simultaneously binds to TCR/CD3 on the NFAT-luc Jurkat reporter cells and to tumor antigen PSMA on PSMA-CHO cells. A no-antibody control was included to determine the background signal.

4. After 16 hours, luciferase activity resulting from the activation of NFAT in Jurkat cells was measured using ONE-Step™ luciferase assay (BPS Bioscience #60690) as per the recommended protocol. As shown in the graph below, bispecific antibody engagement to both the PSMA-CHO cells and the Jurkat reporter cells stimulated NFAT-luciferase activity.

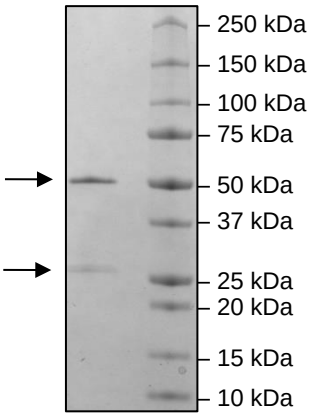
Applications:

This product is for research use only. It is not suitable for human diagnostic or therapeutic use.

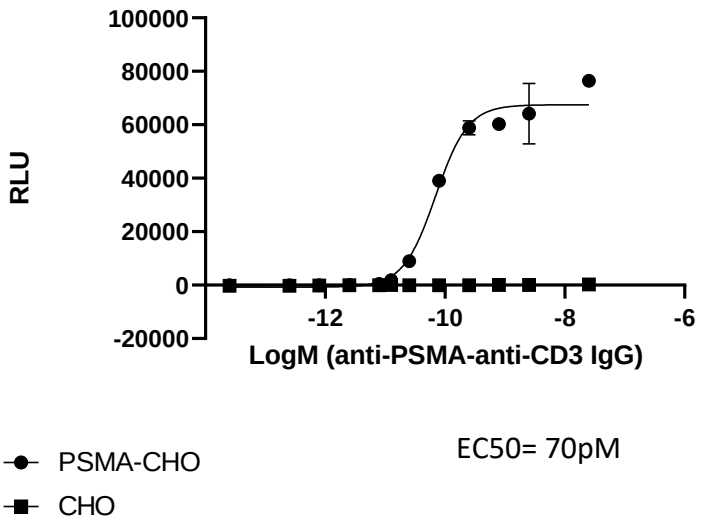
The anti-PSMA-anti-CD3 IgG format bispecific antibody can be used to study PSMA - mediated T cell activation in co-culture assays, using either primary T cells or reporter cell lines such as NFAT-luc-Jurkat cells (BPS Bioscience #60621).

Quality Control Data

4-20% SDS-PAGE Coomassie Staining of the bispecific antibody



Activation of luciferase in NFAT-Jurkat Reporter cells by Anti-PSMA-Anti-CD3 IgG in the presence of PSMA-CHO cells



This graph represents the co-culture assay performed following instructions described in “Protocol”. Data shown is representative. For lot-specific information, please contact BPS Bioscience, Inc. at info@bpsbioscience.com.