CD137 (4-1BB) Ab-1 (Clone BBK-2)
Mouse Monoclonal Antibody
Cat. #MS-621-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)
Cat. #MS-621-P1ABX or -PABX (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)
Cat. #MS-621-B0, -B1, or -B (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Biotin-Labeled Ab with BSA and Azide)

Please note this data sheet has been changed effective December 8, 2011

Description: 4-1BB (also known as CD137) is an inducible receptor-like protein expressed on the cell surface of activated splenic T cells and thymocytes. It exists as both a monomer and a dimer on the surface of activated T cells. 4-1BB is structurally related to the members of NGFR/TNFR superfamily which are characterized by the presence of three-six patterns of a cysteine-rich motif in their extracellular domains. Other members of this family include low affinity NGFR, two receptors for TNF (TNFR-I & TNFR-II), CD30, CD40, OX40, Fas, and CD27. These molecules are involved in cell growth, survival, and death processes. The cytoplasmic domain of 4-1BB include two runs of acidic amino acids, a potential p56Lck binding site, five consecutive glycines at the C-terminus, and four potential phosphorylation sites: one tyrosine, two threonine, and one serine.

Mol. Wt. of Antigen: 30kDa
Epitope: Ectodomain
Species Reactivity: Human. Others-not known.
Clone Designation: BBK-2
Ig Isotype / Light Chain: IgG1/κ
Immunogen: Ectodomain of human 4-1BB recombinant protein.¹

Applications:
- Flow Cytometry
- Immunofluorescence

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: Spleen, thymus, or tonsil.
Cellular Localization: Cell membrane

Supplied As:
200µg/ml of antibody purified from ascites fluid by Protein G chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml.

Storage and Stability:
Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Key References:

Limitations and Warranty:
Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. Lab Vision is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:
This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

¹ See Key References for detailed information on the Immunogen.
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Suggested References:
1. Chu NR; DeBenedette MA; Sternholm BJ; Barber BH; Watts TH. Role of IL-12 and 4-1BB ligand in cytokine production by CD28+ and CD28- T cells. Journal of Immunology, 1997, 158:3081-9.
4. Loo DT; Chalupny NJ; Bajorath J; Shuford WW; Mittler RS; Aruffo A. Analysis of 4-1BB and laminin binding to murine 4-1BB, a member of the tumor necrosis factor receptor superfamily, and comparison with human 4-1BB. Journal of Biological Chemistry, 1997 Mar 7, 272(10):6448-56.
5. Garni-Wagner BA; Lee ZH; Kim YJ; Wilde C; Kang CY; Kwon BS. 4-1BB is expressed on CD45RAhiROhi transitional T cell in humans. Cellular Immunology, 1996, 169(1):91-8.
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ligand for the inducible T cell gene 4-1BB: a member of an emerging family of cytokines with homology to tumor necrosis factor. European Journal of Immunology, 1993, 23:2631-41.

