

Technical Data Sheet

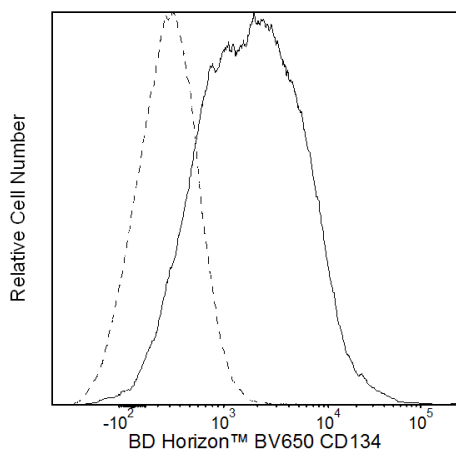
BV650 Mouse Anti-Human CD134**Product Information**

Material Number:	563658
Alternate Name:	OX40; TNFRSF4; TXGP1L; OX40L Receptor
Size:	50 tests
Vol. per Test:	5 µl
Clone:	ACT35 (also known as Ber-ACT35)
Immunogen:	Human HUT 102
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	IV A107, V BP048, V A068, VI C-31
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The ACT35 monoclonal antibody specifically binds to CD134 which is also known as OX40. The 35 kDa CD134 polypeptide is encoded by the *TNFRSF4* gene. CD134 is a type I integral membrane glycoprotein and member of the tumor necrosis factor/nerve growth factor receptor (TNFR/NGFR) family. CD134 is expressed on activated T lymphocytes, hematopoietic precursor cells and fibroblasts. CD134 functions as a T cell costimulatory receptor when bound by OX40 Ligand/TNFSF4 that is expressed by antigen presenting cells. CD134 thereby plays roles in T-cell activation as well as the regulation of differentiation, proliferation or apoptosis of normal and malignant lymphoid cells. Analysis of the nucleotide sequence of the human *TNFRSF4* cDNA reveals strong homology with the rat *Tnfrsf4* cDNA sequence. OX40 was clustered as CD134 in the Sixth International Workshop on Human Leukocyte Differentiation Antigens.

The antibody was conjugated to BD Horizon™ BV650 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 650-nm. BD Horizon™ BV650 can be excited by the violet laser and detected in a filter used to detect APC-like dyes (eg, 660/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there will be spillover into the APC and Alexa Fluor® 700 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



Flow cytometric analysis of CD134 expression on stimulated human peripheral blood lymphocytes. Phytohemagglutinin-stimulated (PHA; Sigma L-1668; 3 days) peripheral blood mononuclear cells were stained with either BD Horizon™ BV650 Mouse Anti-Human CD134 antibody (Cat. No. 563658; solid line histogram) or with BD Horizon™ BV650 Mouse IgG1, κ Isotype Control (Cat. No. 563231; dashed line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphoblasts. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV650 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV650 were removed.

Application Notes**Application**

Flow cytometry

Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
563231	BV650 Mouse IgG1, k Isotype Control	50 µg	X40

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Brilliant Violet™ 650 is a trademark of Sirigen.

References

Harrop JA, Spampinato J, Reddy M, Eichman C, Cook R, Truneh A. CD134 Workshop: Kinetics of expression of tumor necrosis factor receptor molecules and other cytokine receptors on activated CD4-positive cells. In: Kishimoto T, von dem Borne AEG, Goyert SM, et al., ed. *Leucocyte Typing VI: White Cell Differentiation Antigens*. London: Garland Publishing; 1997:871-873. (Clone-specific: Flow cytometry)

Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV*. New York, NY: Oxford University Press; 1989:1-1182. (Clone-specific)

Latz U, Durkop H, Schnittger S, et al. The human OX40 homolog: cDNA structure, expression and chromosomal assignment of the ACT35 antigen. *Eur J Immunol*. 1994; 24(3):677-683. (Clone-specific: Western blot)

Merl A, Pohla H, Adibzadeh M, Paelec G. CD13r Workshop: Expression of cytokine receptors on anergic CD4-positive TCR2-positive TH0 cell clones. In: Kishimoto T, von dem Borne AEG, Goyert SM, et al., ed. *Leucocyte Typing VI: White Cell Differentiation Antigens*. London: Garland Publishing; 1997:873-875. (Clone-specific: Flow cytometry)

Moffat S, Higashimura N, Sugamura K. CD134 (OX40) Workshop Panel report. In: Kishimoto T, von dem Borne AEG, Goyert SM, et al., ed. *Leucocyte Typing VI: White Cell Differentiation Antigens*. London: Garland Publishing; 1997:869-871. (Clone-specific: Flow cytometry)

Schlossman S, Boumell L, et al, ed. *Leucocyte Typing V*. New York: Oxford University Press; 1995. (Clone-specific)

Schwartz R, Stein H. ACT35: a new mAb recognizing a 35-kDa antigen with a tissue distribution similar to that of the CD25 molecule (interleukin-2 receptor). In: Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1989:464-465. (Immunogen: Flow cytometry, Immunohistochemistry, Immunoprecipitation)

Schwartz R, Stein H. Report on single/unclustered and provisionally grouped antibodies. In: Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV: White Cell Differentiation Antigens*. New York, NY: Oxford University Press; 1989:460-463. (Clone-specific: Flow cytometry, Immunoprecipitation)

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