

## Technical Data Sheet

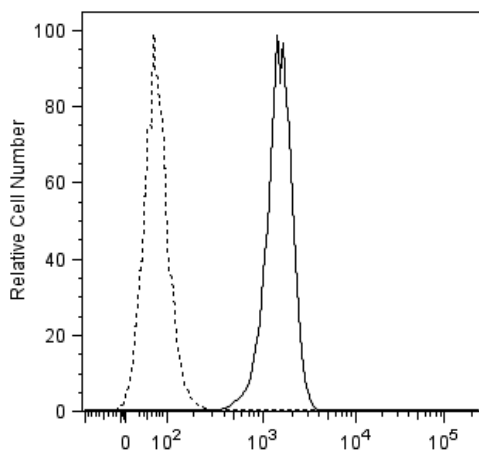
**V450 Mouse anti-Human Alkaline Phosphatase****Product Information**

<b>Material Number:</b>	<b>561502</b>
<b>Alternate Name:</b>	Bone/Kidney/Liver Alkaline Phosphatase, TNAP, TNSALP, AP-TNAP, ALPL
<b>Entrez Gene ID:</b>	249
<b>Size:</b>	100 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	B4-78
<b>Immunogen:</b>	Human Bone Alkaline Phosphatase
<b>Isotype:</b>	Mouse (BALB/c) IgG1, κ
<b>Reactivity:</b>	QC Testing: Human Lack of Reactivity Confirmed in Development: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

**Description**

The B4-78 monoclonal antibody reacts with the tissue-nonspecific isozyme of alkaline phosphatase. Alkaline phosphatases are membrane-bound glycoproteins. Four isozymes of alkaline phosphatase exist in humans: placental, placental-like, intestinal, and liver/bone/kidney. Liver/bone/kidney alkaline phosphatase is also known as tissue-nonspecific alkaline phosphatase (TNAP). Human embryonic stem cells and embryonic carcinoma cells express high levels of tissue-nonspecific alkaline phosphatase that decrease upon differentiation. Genetic and biochemical studies suggest that TNAP plays a role in skeletal mineralization.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at **450 nm**. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



V450 Alkaline Phosphatase, with isotype control

**Flow cytometric analysis of Alkaline Phosphatase expression on human embryonic stem (ES) cells.** H9 human ES cells (WiCell, Madison, WI) passage 33 grown in mTESR™ 1 media (StemCell Technologies) on BD Matrigel™ hESC-qualified Matrix (Cat. No. 354277) were harvested and stained with BD Horizon™ V450 Mouse anti-Human Alkaline Phosphatase antibody (solid line) or a BD Horizon™ V450 mouse IgG1, κ isotype control (Clone MOPC-21, Cat. No. 560373, dashed line). Flow cytometry was performed on a BD™ LSR II flow cytometry 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™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

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## Application Notes

### Application

Flow cytometry

Routinely Tested

### Suggested Companion Products

Catalog Number	Name	Size	Clone
354277	BD Matrigel™ hESC-qualified Matrix, 5 ml vial	NA	(none)
560373	V450 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
554656	Stain Buffer (FBS)	500 ml	(none)

### Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100-μl experimental sample (a test).
2. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
5. mTESR™1 is a trademark of StemCell Technologies.
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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

### References

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