

# Technical Data Sheet

## BV786 Hamster Anti-Mouse CD183

### Product Information

Material Number:	741032
Size:	50 µg
Clone:	CXCR3-173
Alternative Name:	CXCR3; Cxcr3; CXC-R3; CXCR-3; GPR9; IP-10 Receptor
Reactivity:	Mouse (Tested in Development)
Isotype:	Armenian Hamster IgG1, κ
Immunogen:	Mouse CXCR3 peptide (amino acids 1–37) Peptide
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	12766
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The CXCR3-173 monoclonal antibody specifically binds to mouse CD183, also known as CXCR3. CD183 is a seven transmembrane spanning, G protein-coupled chemokine receptor for CXC chemokines including CXCL9 (Mig), CXCL10 (IP-10) and CXCL11 (I-TAC). These chemokines are induced by inflammatory cytokines including IFN-γ, IFN-α/β, and TNF. CXCR3 is primarily expressed on activated/memory CD4+ and CD8+ T lymphocytes, Foxp+ regulatory T cells, natural killer T (NKT) cells and mature NK cells. Binding of chemokines to CXCR3 induces integrin activation, cytoskeletal changes, and chemotactic migration of activated lymphocytes. CD183 has been reported to play important roles in T cell recruitment and immune responses in a number of inflammatory and autoimmune diseases. The CXCR3-173 antibody reportedly inhibited in vitro chemotactic responses to CXCL10 or CXCL11 significantly but not to CXCL9. When administered systemically to mouse hosts, the CXCR3-173 antibody reportedly prolonged cardiac and pancreatic islet cell allograft survival. In the presence of CXCR3 ligands, especially, CXCL10 and CXCL11, staining with the antibody can be significantly blocked.

The antibody was conjugated to BD Horizon™ BV786 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 786-nm. BD Horizon BV786 can be excited by the violet laser and detected in a filter used to detect Cy™7-like dyes (eg, 780/60-nm filter).

### 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 BV786 under optimal conditions that minimize unconjugated dye and antibody.

### Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
564389	BV786 Hamster IgG1, κ Isotype Control	50 µg	A19-3
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	

## Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
7. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.com/us/s/resources) for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Violet 786 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
10. Cy is a trademark of Amersham Biosciences Limited.

## References

Krug A, Uppaluri R, Facchetti F, et al. IFN-producing cells respond to CXCR3 ligands in the presence of CXCL12 and secrete inflammatory chemokines upon activation. *J Immunol.* 2002; 169(11):6079-6083.

Soto H, Wang W, Strieter RM, et al. The CC chemokine 6Ckine binds the CXC chemokine receptor CXCR3. *Proc Natl Acad Sci U S A.* 1998; 95(14):8205-8210.

Tamaru M, Tominaga Y, Yatsunami K, Narumi S. Cloning of the murine interferon-inducible protein 10 (IP-10) receptor and its specific expression in lymphoid organs. *Biochem Biophys Res Commun.* 1998; 251(1):41-48.

Uppaluri R, Sheehan KC, Wang L, et al. Prolongation of cardiac and islet allograft survival by a blocking hamster anti-mouse CXCR3 monoclonal antibody. *Transplantation.* 2008; 86(1):137-147.

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