

Technical Data Sheet

Purified Rat Anti-Mouse CD90

Product Information

Material Number:	553016
Alternate Name:	Thy-1
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	G7
Immunogen:	Mouse T-cell hybridoma C 6/68
Isotype:	Rat (LEW) IgG2c, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The G7 antibody reacts with the Thy-1.1 and Thy-1.2 alloantigens (CD90.1 and CD90.2, respectively) on thymocytes, peripheral T lymphocytes, some intraepithelial T lymphocytes (IEL, DEC), and neurons, but not B lymphocytes, of all mouse strains. CD90 is a GPI-anchored membrane glycoprotein of the Ig superfamily which is involved in signal transduction. In addition, there is evidence that CD90 mediates adhesion of thymocytes to thymic stroma. Soluble G7 mAb stimulates murine T-cell proliferation and IL-2 secretion, *via* signalling through the TCR/CD3 complex. mAb G7 has been reported to promote apoptosis of thymocytes and CTL clones, as determined by morphological and biochemical criteria. The Thy-1-triggered thymocyte death was found to be developmentally regulated and targeted mainly within the CD4+CD8+CD3- and CD4+CD8+CD3^{lo} cultured immature thymocytes. G7 antibody does not react with Thy-1 (CD90) on rat thymocytes.

Preparation and Storage

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

Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-zinc-fixed	Reported
Activation	Reported
Apoptosis	Reported
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended

Recommended Assay Procedure:

Other reported applications include *in vitro* T-cell activation induction of apoptosis, and immunohistochemical staining (IHC) of acetone-fixed frozen and zinc-fixed paraffin-embedded sections. IHC of formalin-fixed paraffinembedded sections is not recommended. For IHC of tissue expressing the Thy-1.1 alloantigen, we recommend the use of anti-mouse CD90.2 mAb 53-2.1 (Cat. no. 550543) in our special formulation for immunohistochemistry.

Suggested Companion Products

Catalog Number	Name	Size	Clone
550543	Purified Rat Anti-Mouse CD90.2	1.0 ml	53-2.1
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal
553982	Purified Rat IgG2c, κ Isotype Control	0.5 mg	A23-1

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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3. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
4. 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.

References

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