

Technical Data Sheet

Biotin Rat Anti-Mouse IgG2a

Product Information

Material Number:	553388
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	R19-15
Immunogen:	Pooled BALB/c and C57BL/6 mouse Ig
Isotype:	Rat (LOU) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The R19-15 antibody recognizes an epitope in the CH3 domain of mouse IgG2a, with strong reactivity to the *Igh-I[a]* allotype and weaker reactivity to *Igh-I[b]*. It does not react with other Ig isotypes. Molecular genetic analyses suggest that the *Igh-I[b]* allele, which encodes *IgG2a[b]*, is derived from a locus found in several wild mouse subspecies, but not domestic mice, which encodes the *IgG2c* isotype.

This antibody is routinely tested by ELISA Detection and flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested
ELISA Detection	Routinely Tested

Recommended Assay Procedure:

For the sandwich mouse IgG2a ELISA, biotin-conjugated R19-15 mAb is optimal for detection with purified anti-mouse IgG2a R11-89 mAb (Cat. No. 553446) for capture. This pair of anti-mouse IgG2a mAbs can effectively quantitate mouse IgG2a of these mouse *Igh-C* allotypes, in order of sensitivity from highest to lowest: *e*, *a*, *j*, and *b*. Biotinylated R19-15 mAb may be used as a primary or secondary reagent in immunofluorescent staining. For flow cytometric detection of intracytoplasmic IgG2a, we recommend FITC-conjugated mAb R19-15 (Cat. No. 553390). For immunohistochemical staining, we recommend the use of biotinylated R19-15 mAb in our special formulation for immunohistochemistry, Cat. No. 550332.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553446	Purified Rat Anti-Mouse IgG2a	0.5 mg	R11-89
553390	FITC Anti-Mouse IgG2a	0.5 mg	R19-15
550332	Biotin Rat Anti-Mouse IgG2a	1.0 ml	R19-15
553923	Biotin Rat IgG1, κ Isotype Control	0.25 mg	R3-34

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.

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References

Martin RM, Silva A, Lew AM. The Igh-1 sequence of the non-obese diabetic (NOD) mouse assigns it to the IgG2c isotype. *Immunogenetics*. 1997; 46(2):167-168. (Biology)

Morgado MG, Cam P, Gris-Liebe C, Cazenave PA, Jouvin-Marche E. Further evidence that BALB/c and C57BL/6 gamma 2a genes originate from two distinct isotypes. *EMBO J*. 1989; 8(11):3245-3251.(Biology)

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