# SONY

Product Data Sheet

Brilliant Violet 605™ anti-mouse CD117 (c-kit)

Catalog # / Size: 1275600 / 50 µg
1275605 / 125 µl

1275610 / 500 µl

Clone: ACK2

Isotype: Rat IgG2b, κ

Immunogen: Murine IL-3 dependent mast cells

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 605™ and unconjugated antibody.

Formulation: microL sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). microg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Concentration: microL sizes: lot-specific
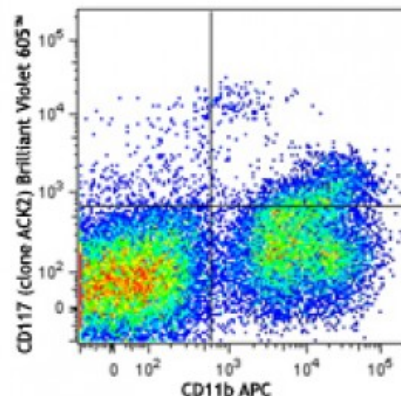
C57BL/6 mouse bone marrow cells were stained with CD11b APC and CD117 (clone ACK2) Brilliant Violet 605™. Data shown was gated on total bone marrow cells.

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining using the microL sizes, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. For flow cytometric staining using the microg size, the suggested use of this reagent is ≤0.25 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 605™ is a trademark of Sirigen Group Ltd.

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Application Notes: Injection of ACK2 in mice of NOD genetic background is not recommended as mice develop immediate anaphylaxis, resulting in animal death. Treatment is possible with co-injection of Benadryl.3

ACK2 has been reported to block c-Kit function. The LEAF™ purified antibody

(Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 135103). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 135114) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

Application References:
1. Yoshinaga K, *et al.* 1991. *Development* 113:689.
2. Broudy VC, *et al.* 1996. *Blood* 88:75.
3. Louvet C, *et al.* 2008. *Proc. Natl. Acad. Sci. USA* 105:18895.

Description: CD117 is a 145 kD immunoglobulin superfamily member, also known as c-Kit and stem cell factor receptor (SCFR). It is a transmembrane tyrosine-kinase receptor that binds the c-Kit ligand (also known as steel factor, stem cell factor, and mast cell growth factor). CD117 is expressed on hematopoietic stem cells (including multipotent hematopoietic stem cells, progenitors committed to myeloid and/or erythroid lineages, and T and B cell precursors), mast cells, and acute myeloid leukemia (AML) cells. CD117 interaction with its ligand is critical for the development of hematopoietic stem cells.

Antigen References:
1. Barclay A *et al.* 1997. *The Leukocyte Antigen FactsBook Academic Press.*
2. Galli SJ. *et al.* 1994. *Adv. Immunol.* 55:1.
3. Ikuta K *et al.* 1992. *Annu. Rev. Immunol.* 10:759.
4. Besmer P