

Ly-6G (E6Z1T) Rabbit mAb

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Applications: W, IHC-Bond, IHC-P	Reactivity: M	Sensitivity: Endogenous	MW (kDa): 20-40	Source/Isotype: Rabbit IgG	UniProt ID: #P35461	Entrez-Gene Id: 546644
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Product Usage Information**Application**

Western Blotting
IHC Leica Bond
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:300 - 1:1200
1:75 - 1:300

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

For a carrier free (BSA and azide free) version of this product see product #75028.

Specificity/Sensitivity

Ly-6G (E6Z1T) Rabbit mAb recognizes endogenous levels of total Ly-6G protein. This antibody does not cross-react with Ly-6C1, Ly-6C2, Ly-6F, or Ly-6I. Non-specific staining was observed in mouse gastrointestinal epithelium by immunohistochemistry.

Source / Purification Background

Monoclonal antibody is produced by immunizing animals with mouse Ly-6G recombinant protein.

The Ly-6 complex is a series of genes found on chromosome 15. These genes code for a number of different proteins that can be used as surface markers. The family members vary in their biologic expression and have been shown to be involved in cell signaling and cell adhesion (1). The structure of these proteins includes a motif known as the LU domain that has three loops comprised of disulfide bonds. These bonds are formed by 8 to 10 cysteines that can cause differences in the length of the loops as well as the sequences at each tip (2,4). There are 11 known Ly-6 genes on murine chromosome 15 that code for different proteins. These family members, excluding secreted Ly6/Plaur domain containing 1 coded by the *Slurp1* gene, are attached to the cell surface by a GPI anchor near the C terminus. The structure of these proteins may play a role in transmembrane interactions, and downstream signaling cascades (1,2).

Ly-6 proteins have been widely used as differentiation markers on hematopoietic cells. The ability to isolate and express specific Ly-6 antibodies through hybridoma technology has allowed researchers to identify unique proteins (1). These proteins are expressed on subsets of immune cells at different stages of development, such as T cells, B cells, monocytes, granulocytes, and macrophages (1-5).

Ly-6G is used as a marker for mouse neutrophils (2,3). It is also expressed by mouse polymorphonuclear myeloid-derived suppressor cells (PMN-MDSCs) (6).

Background References

1. Bamezai, A. (2004) *Arch Immunol Ther Exp (Warsz)* 52, 255-66.
2. Lee, P.Y. et al. (2013) *J Leukoc Biol* 94, 585-94.
3. Fleming, T.J. et al. (1993) *J Immunol* 151, 2399-408.
4. Tsetlin, V. (1999) *Eur J Biochem* 264, 281-6.
5. Pflugh, D.L. et al. (2000) *J Immunol* 165, 313-21.
6. Bronte, V. et al. (2016) *Nat Commun* 7, 12150.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

M: Mouse

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