

**POLYCLONAL ANTIBODY**

# Anti-CD117 (c-Kit) (Human) pAb

**Code No.**  
566-H

**Quantity**  
6 mL

**Form**  
Ready for use

**BACKGROUND:** c-Kit, also known as stem cell factor receptor, steel factor receptor or CD117 is classified as a type III receptor tyrosine kinase (RTK) belonging to the platelet-derived growth factor receptor subfamily. Binding of stem cell factor (SCF), known as c-Kit ligand to c-Kit, initiates autophosphorylation of the receptor, subsequently leading to promotes a signal transduction cascade through Ras-Raf-MAP kinase cascade, phosphatidylinositol-3-kinase, src family kinases, and JAK/STAT pathways. The roles of c-Kit include maturation of hematopoietic and primordial germ cells precursors and melanocytes during embryonic development. In acute myeloid leukemia (AML), c-Kit has been proposed to play a functional role, and becomes target molecule for drug development.

**SOURCE:** This antibody was purified from rabbit serum using the synthesized peptides (C-terminal of c-Kit gene product; K963) coupled protein A agarose column. The rabbit was immunized with carrier protein conjugated synthesized peptides (K963).

**FORMULATION:** 6 mL volume of pre-diluted antibody in 20 mM HEPES (pH 7.2), containing 135 mM NaCl, 1% BSA and 0.09% NaN<sub>3</sub>.

\*Azide may react with copper or lead in plumbing system to form explosive metal azides. Therefore, always flush plenty of water when disposing materials containing azide into drain.

**STORAGE:** This antibody solution is stable for 3 years from the date of purchase when stored at 4°C.

**REACTIVITY:** This antibody reacts with c-Kit on Immunohistochemistry.

## APPLICATIONS:

Immunohistochemistry: Ready for use

Heat treatment is necessary for paraffin embedded sections.

Microwave oven; 2 times for 10 minutes each in 10 mM citrate buffer (pH 6.5)

\*Please refer to the data sheet (MBL code no. 566) for other applications.

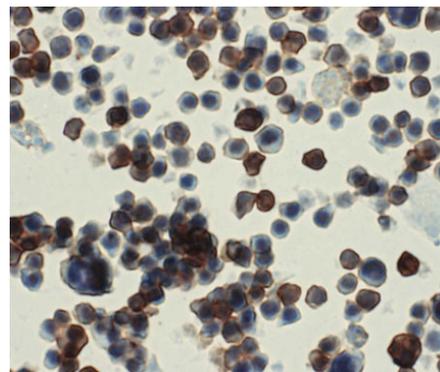
Detailed procedure is provided in the following **PROTOCOL.**

## SPECIES CROSS REACTIVITY:

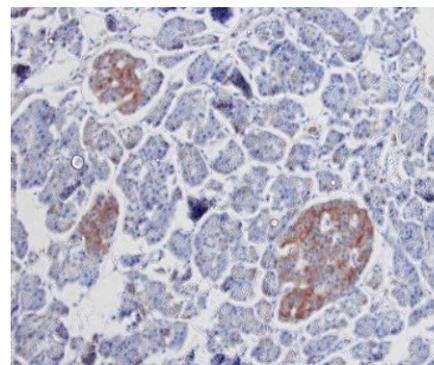
Species	Human	Mouse	Rat
Cell and Tissue	HEL, pancreas	Not tested	Not tested
Reactivity on IHC	+		

## INTENDED USE:

For Research Use Only. Not for use in diagnostic procedures.



**Immunohistochemical detection of CD117/c-Kit on paraffin embedded section of HEL cells with 566-H.**



**Immunohistochemical detection of CD117/c-Kit on paraffin embedded section of human pancreas with 566-H.**

**REFERENCES:**

- 1) Koch, A. C., *et al.*, *Ann. N.Y. Acad. Sci.* **1073**, 517-526 (2006)
- 2) Lyford, G. L., *et al.*, *Gut* **51**, 496-501 (2002)
- 3) Sakurai, S., *et al.*, *Am. J. Pathol.* **154**, 23-28 (1999)
- 4) Tsuura, T., *et al.*, *Virchows Archiv.* **424**, 135-141 (1994)
- 5) Hidi, K., *et al.*, *Oncogene* **6**, 2291-2296 (1991)
- 6) Yarden, Y., *et al.*, *EMBO J.* **6**, 3341-3351 (1987)

This antibody is used in the reference number 1) - 3).

The descriptions of the following protocols are examples.

Each user should determine the appropriate condition.

**PROTOCOL:**

**Immunohistochemical staining for paraffin-embedded sections**

- 1) Deparaffinize the sections with Xylene 3 times for 3-5 minutes each.
- 2) Wash the slides with Ethanol 3 times for 3-5 minutes each.
- 3) Wash the slides with PBS 3 times for 3-5 minutes each.
- 4) Heat treatment  
Heat treatment by microwave oven:  
Place the slides put on staining basket in 500 mL beaker with 500 mL citrate buffer (pH 6.5). Cover the beaker with plastic wrap, then process the slides 2 times for 10 minutes each at 500 W with microwave oven. Let the slides cool down in the beaker at room temperature for about 40 minutes.
- 5) Remove the slides from the citrate buffer and cover each section with 3% H<sub>2</sub>O<sub>2</sub> for 10 minutes at room temperature to block endogenous peroxidase activity. Wash 3 times in PBS for 5 minutes each.
- 6) Remove the slides from PBS, wipe gently around each section and cover tissues with 1% BSA in PBS for 5 minutes to block non-specific staining. Do not wash.
- 7) Tip off the blocking buffer, wipe gently around each section and cover tissues with one or two drops of primary antibody (Ready for use).
- 8) Incubate the sections for 1 hour at room temperature.
- 9) Wash the slides 3 times in PBS for 5 minutes each.
- 10) Wipe gently around the section and incubate with Histostar™ (Rb) (MBL; code no. 8466) for 30 min. at room temperature. Wash as in step 9).
- 11) Visualize by reacting for 5 min. with Histostar™ DAB Substrate Solution (MBL; code no. 8469). \*DAB is a suspect carcinogen and must be handled with care. Always wear gloves.
- 12) Wash the slides in water for 5 minutes.
- 13) Counter stain in hematoxylin for 1 minute, wash the slides 3 times in water for 5 minutes each, and then immerse the slides in PBS for 5 minutes. Dehydrate by immersing in Ethanol 3 times for 3 minutes each, followed by immersing in Xylene 3 times for 3 minutes each.
- 14) Now ready for mounting.

(Positive controls for immunohistochemistry; HEL and human pancreas)

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