Technical Data Sheet

Purified Mouse Anti-CD117

Product Information

Material Number: 612318
Alternate Name: c-Kit
Size: 50 µg
Concentration: 250 µg/ml
Clone: 28/CD117
Immunogen: Human c-Kit aa. 1-115
Isotype: Mouse IgG2a
Reactivity: QC Testing: Human
Target MW: 145 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

c-Kit, a type III tyrosine kinase receptor, binding of stem cell factor (SCF) is involved in the regulation of a wide range of tissues at various developmental stages. c-Kit is a 145 kDa protein with an N-terminal domain containing an extracellular domain and a transmembrane domain (TMD) typical of a transmembrane receptor kinase and has been renamed as CD117 with the new nomenclature. SCF and c-kit play a major role in regulation of human haematopoiesis as evidenced by increases in c-kit expression when erythroid differentiation is inhibited with basic fibroblast growth factor. Activating mutations of c-kit are associated with sporadic adult human mastocytosis (SAHM), gastrointestinal stromal tumors (GIST), acute myeloid leukemia (AML), and germ cell tumors. Activation of STAT-3 may be a key requirement for c-kit tumorigenicity. Human germ cell proliferation and survival are highly dependent on c-kit expression and genetic mutations of c-kit result in infertility, disruption of spermatogenesis, and some testicular disorders. Blockage of SCF binding to c-kit via inhibitors of the ligand may be a viable clinical approach in management of GIST and possibly other diseases. Thus, c-kit plays a major role in reproductive development and in many human diseases, including various cancers.

Western blot analysis of CD117 on HEL lysate.

Preparation and Storage

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

Store undiluted at -20°C.

Application Notes

Application

Western blot Routinely Tested

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1.0 ml</td>
<td>(none)</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to wwwbdbiosciencescompharmengprotocols 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References
Ma Y, Zeng S, Metcalfe DD, et al. The c-KIT mutation causing human mastocytosis is resistant to STI571 and other KIT kinase inhibitors; kinases with enzymatic site mutations show different inhibitor sensitivity profiles than wild-type kinases and those with regulatory-type mutations. Blood. 2002; 99(5):1741-1744. (Biology)