Technical Data Sheet

PE Mouse Anti-Human Chromogranin A

Product Information

Material Number: 564563
Alternate Name: CGA; CgA; CHGA; Chromogranin-A; CMGA; SP-I
Size: 50 tests
Vol. per Test: 5 µl
Clone: S21-537
Immunogen: Human Chromogranin A Recombinant Protein
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Chromogranin A (CGA) is a member of the granin family of regulated secretory proteins that are found in secretory granules in endocrine and neuroendocrine cells and released in response to extracellular stimulation. Intracellularly, granins are important for targeting peptide hormones and neurotransmitters by their ability to aggregate in the low pH, high calcium environment of the trans-Golgi network. Extracellularly, peptides formed from proteolytic processing of granins regulate hormone secretion. CGA is a prohormone that can be cleaved into several biologically active peptides, such as pancreastatin, β-granin, vasostatin, catestatin, and parastatin. β-granin is an N-terminal fragment of CGA, while pancreastatin and catestatin are processed from the central region of CGA. Cells of the adrenal medulla, anterior pituitary, cerebral cortex as well as beta cells of the pancreas and a variety of tumor cell lines express CGA. The expression of CGA can be used to monitor the pancreatic differentiation of pluripotent stem cells.

Flow cytometric analysis of Chromogranin A expression in human neuroblastoma cells. SH-SY5Y neuroblastoma cells (ATCC CRL-2266) were fixed and permeabilized using BD Cytofix/Cytoperm™ Fixation/Permeabilization Kit (Cat No. 554714), washed twice with BD Perm/Wash™ Buffer (Cat. No. 554723), then stained with either PE Mouse Anti-Human Chromogranin A (Cat. No. 564563; solid line histogram) or PE Mouse IgG1, κ Isotype Control (Cat. No. 554680; dashed line histogram) monoclonal antibodies. The fixed cells were resuspended in stain buffer and acquired on a BD™ LSR II Flow Cytometry System. The overlay histograms were derived from gated events with forward and side light-scatter characteristics of viable cells. Additionally, PE Mouse Anti-Human Chromogranin A was negative on human embryonic stem (ES) cells (data not shown).

Preparation and Storage

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

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

Application Notes

Application

| Intracellular staining (flow cytometry) | Routinely Tested |

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
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<td>PE Mouse IgG1, κ Isotype Control</td>
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<tr>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. 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.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References