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ProductInformation

ANTI-GATA-1
Developed in Rabbit,
Affinity Isolated Antibody

Product Number **G 0290**

Product Description

Anti-GATA-1 is developed in rabbit using a synthetic GATA-1, C-terminal peptide (K-FPTGPMPPTTS TT-VVAPLSS) conjugated to KLH with glutaraldehyde. The peptide corresponds to the amino acid residues 394-413 of human GATA-1 with N-terminal added lysine. The antibody is affinity purified using the immunizing peptide immobilized on agarose.

Anti-GATA-1 recognizes an epitope located on the C-terminal portion of human GATA-1. By immunoblotting, the antibody reacts specifically with GATA-1 (single band at ~45 kD). An additional lower molecular weight band may appear in some preparations. Staining of the GATA-1 band is inhibited by the GATA-1 peptide (amino acid residues 394-413).

GATA-1 (ERYF1, GF-1, NF-1) is a Cys2/Cys2 zinc finger DNA binding protein that is expressed primarily in erythroid, megakaryocytic, mast cells and eosinophilic cells. It activates transcription from (A/T) GATA (A/G) elements in the regulatory sequences of virtually all erythroid genes, but also in some non-erythroid genes e.g. of spermatogenic cells.[1,2,3,4] GATA-1 is a member of a family comprising GATA-1, GATA-2, GATA-3, GATA-4, GATA-5, GATA-6 and OSP-1. Its stable DNA binding is dependent on cooperation between the two zinc fingers. These fingers also interact with other transcription factors. DNA binding is cell cycle dependent.[5] GATA-1 associates with p300/CREB binding protein acetyltransferase; acetylation of GATA-1 stimulates GATA-1 dependent transcription.[6]

GATA-1 serves as a central regulator for erythroid gene transcription and development. GATA-1 expression is enhanced during erythroid maturation.[1,2,3,5] It is able to reprogram cellular phenotype in a dominant fashion. GATA-1 is involved in blocking apoptosis of precursor cells and in controlling the balance between proliferation and cell cycle arrest.[7] FOG (Friend of GATA-1) is a nine-zinc finger protein cofactor of GATA-1.[8]

Reagents

The product is provided as affinity isolated antibody in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 15 mM sodium azide (see MSDS)* as a preservative.

Protein concentration is approximately 1 mg/ml by absorbance at 280 nm.

Precautions and Disclaimer

* Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A minimum working dilution of 1:400 is determined by immunoblotting using whole extract of K562 human chronic myelogenous leukemia cells.

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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