SPTA1
Recombinant Human Spectrin Alpha (aa 1601-1818) GST

Catalog No.	CRG119A	**Quantity:**	2 µg
	CRG119B		10 µg
	CRG119C		1.0 mg

Alternate Names: Spectrin alpha chain erythrocyte, Erythroid alpha-spectrin, SPTA1, SPTA, EL2, HPP, HS3, SPH3.

Description: Erythrocyte spectrin is the main component of the red cell membrane skeleton responsible for the shape and physical properties of red cells. SPTA1 is a member of the alpha-spectrin gene family. Spectrin is composed of 2 subunits a and b (280 and 246 kDa respectively). The human erithroid a-spectrin (2418 amino acids) consists of 22 repeating segments of about 106 amino acids in length. SPTA1 forms weaker tetramer interactions than non-erythrocytic alpha spectrin, which may increase the plasma membrane elasticity and deformability of red blood cells. This protein was demonstrated to be a specific substrate for ubiquitination in vitro and in vivo. The main ubiquitination site on human a-spectrin was identified in the lysine 27 of the repeating segment 17 by site directed mutagenesis. Cell-free experiments using radiolabeled, biotinylated or native ubiquitin and cellular lysates from rabbit retyculocytes, human erythrocytes or k562 cells, showed that only monoubiquitination occurs at this site. Mutations in the SPTA1 gene result in a variety of hereditary red blood cell disorders, such as elliptocytosis type 2, pyropoikilocytosis, and spherocytic hemolytic anemia.
Description Recombinant fusion protein: Glutathione-S-Transferase (GST) and a fragment of human a-spectrin (from Lysine 1601 to Leucine 1818) containing repeat 17 and the ubiquitination target lysine 27. The total molecular weight of the fusion protein is 52.4 kDa.

Concentration: 1.7 mg/ml

Gene ID: 6708

Source: *E. coli*

Molecular Weight: 52.4 kDa

Formulation: Sterile filtered liquid in 50 mM Tris, pH 8.0 + 10 mM glutathione

Purity: Greater than 90.0% as determined by both
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Endotoxin Level: < 0.1 ng/µg of GST-alpha Spectrin

Applications: Substrate for cell-free ubiquitination assays

Storage & Stability: Store in working aliquots at -20°C to -80°C. **Avoid repeated freeze-thaw cycles.**

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