

## Recombinant Fumarase / FH (45-510) protein

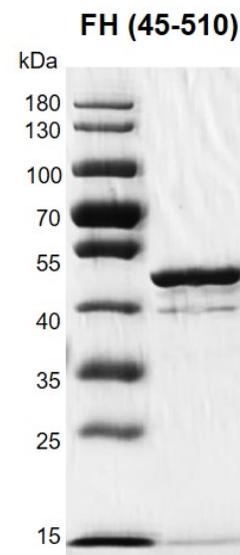
**Catalog No:** 81293, 81993**Expressed In:** *E. coli***Quantity:** 50, 1000 µg**Concentration:** 1.3 µg/µl**Source:** Human**Buffer Contents:** Recombinant Fumarase / FH (45-510) protein is supplied in 25 mM TrisHCl pH 8.0, 300 mM NaCl, 10% glycerol, and 0.5 mM TCEP.

**Background:** Fumarase (Fumarate Hydratase), also called as FH, is an enzymatic component of the tricarboxylic acid (TCA) cycle, or Krebs cycle, and catalyzes the formation of L-malate from fumarate. It exists in both a cytosolic form and an N-terminal extended form, differing only in the translation start site used. The N-terminal extended form is targeted to the mitochondrion, where the removal of the extension generates the same form as in the cytoplasm. It is similar to some thermostable class II fumarases and functions as a homotetramer. Fumarase (FH) catalyzes the reversible hydration and dehydration of fumarate to malate in the tricarboxylic-acid cycle to facilitate a transition step in the production of energy in the form of NADH. In the cytosol, FH metabolizes fumarate, which is a byproduct of the urea cycle and amino acid catabolism. Besides, FH translocates from the cytosol into the nucleus upon DNA damage. They are very important targets both in the study of human metabolic disorders and as potential therapeutic targets in neglected tropical diseases and tuberculosis.

**Protein Details:** Recombinant Fumarase / FH (45-510) protein that includes amino acid 45-510 of human Fumarase (accession number NP\_000134.2) was expressed in *E. coli* cells with a C-terminal 6×His-Tag. The molecular weight of the protein is 51.3 kDa.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of arrival.

**Recombinant Fumarase / FH protein gel**

10% SDS-PAGE with Coomassie blue staining

MW: 51.3 kDa

Purity: &gt;88%