6-PHOSPHOGLUCONATE DEHYDROGENASE from *E. coli* (Lot 190701a)

Recombinant

E-PGDHEC **04/20**

(EC 1.1.1.44)

Synonyms: 6-phospho-D-gluconate:NADP+ 2-oxidoreductase (decarboxylating)

CAS: 9073-95-4

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 52,500)
- One major band on isoelectric focusing (pI ~ 5.3)

2. SPECIFIC ACTIVITY:

9 U/mg protein at pH 7.6 and 25°C.

One Unit of 6-phosphogluconate dehydrogenase (6-PGDH) is defined as the amount of enzyme required to produce one µmole of NADPH from $NADP^+$ under the following assay conditions:

TEA buffer, pH 7.6	86 mM
ATP	7.5 mM
$MgCl_2$	8.6 mM
D-Gluconic acid	3.2 mM
$NADP^+$	0.9 mM
Gluconate kinase	6.0 U mL

3. SPECIFICITY:

Catalyses the reaction:

6-phospho-D-gluconate + NADP+ = D-ribulose 5-phosphate + CO2 + NADPH + H+

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
D-gluconate 6-phosphate	100
NADH	< 0.0001
NADPH	< 0.0001

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 7.6 and up to 25°C

6. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. **Swirl to mix the enzyme immediately prior to use.**