



## 6-PHOSPHOGLUCONATE DEHYDROGENASE from *E. coli* (Lot 70701d)

### Recombinant

### E-PGDHEC

05/13

(EC 1.1.1.44) 6-phospho-D-gluconate:NADP<sup>+</sup> 2-oxidoreductase (decarboxylating)

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 52,546)
- Single major band on isoelectric focusing (pI ~ 5.3)

#### 2. SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES:

**38 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  $\mu$ mole of NADPH from NADP<sup>+</sup> under the following assay conditions:

|                    |          |
|--------------------|----------|
| TEA buffer, pH 7.6 | 86 mM    |
| ATP                | 7.5 mM   |
| MgCl <sub>2</sub>  | 8.6 mM   |
| D-Gluconic acid    | 3.2 mM   |
| NADP <sup>+</sup>  | 0.9 mM   |
| Gluconate kinase   | 6.0 U mL |

#### 3. OTHER ACTIVITIES (as a percentage of 6-PGDH activity):

| Enzyme Measured | Substrate               | Activity, % |
|-----------------|-------------------------|-------------|
| 6-PGDH          | D-gluconate 6-phosphate | 100         |
| NADH oxidase    | NADH                    | < 0.0001    |
| NADPH oxidase   | NADPH                   | < 0.0001    |

#### 4. PHYSICOCHEMICAL PROPERTIES:

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

#### 5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

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