

PRODUCT SPECIFICATIONS

| | |
|--------------------------------|---|
| Name | Anti-h CEA 5905 SP-5 |
| Specificity | Antibody recognizes human carcinoembryonic antigen |
| Description | Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components |
| Product code | 100869 |
| Product buffer solution | 0.9 % NaCl, 0.095 % NaN ₃ as a preservative |
| Shelf life and storage | 36 months from manufacturing at 2–8 °C |
| Analyte description | Carcinoembryonic antigen (CEA) is a glycoprotein involved in cell adhesion. It is normally produced during fetal development, but the production of CEA stops before birth. Therefore, it is not usually present in the blood of healthy adults, but elevated levels have been found in individuals with carcinomas. CEA measurement is mainly used as a tumor marker to identify recurrences after surgical resection. CEA levels may also be raised in some non-neoplastic conditions like ulcerative colitis, pancreatitis, and cirrhosis. |

PARAMETERS TESTED ON EACH LOT

| | |
|------------------------------|--|
| Product appearance | Liquid, may turn slightly opaque during storage |
| Product concentration | 5.0 mg/ml (+/- 10 %) |
| Immunoreactivity | 80–120 % compared to the reference sample in an FIA test |
| IEF Profile | 6.1 – 7.2 |
| Purity | ≥ 95 % |

PARAMETERS DETERMINED DURING PRODUCT DEVELOPMENT

| | |
|-----------------------------------|------------------------------------|
| Subclass | IgG ₁ |
| Association rate constant | Not Determined (N/D) |
| Dissociation rate constant | N/D |
| Affinity constant | 5 x 10 ¹⁰ l/mol |
| Determination method | Radioimmunoassay (RIA) |
| Determination antigen | CEA, BIOSCAN (Cat 100, Lot 118-1A) |

Cross-reactivities

Some cross-reactivity with human NCA (non-specific cross-reacting antigen) and NCA-2 (non-specific cross-reacting antigen-2).

Epitope

Epitope group A as described in Bhayana et al. (1989)

Pair recommendations

| | | DETECTION | | | | |
|---------|------|-----------|------|------|------|------|
| | | 5905 | 5909 | 5910 | 5911 | 5912 |
| CAPTURE | 5905 | - | - | - | - | - |
| | 5909 | + | - | + | - | - |
| | 5910 | - | + | - | - | + |
| | 5911 | - | - | - | - | - |
| | 5912 | - | - | + | - | - |

Please note that pair recommendations are based on results obtained by our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations are only indicative.

Product stability

| TEMPERATURE, TIME | RESULT |
|-------------------|--------------------------|
| -70 °C, 21 days | N/D |
| -20 °C, 21 days | OK |
| +4 °C, 21 days | OK |
| +30 °C, 21 days | OK |
| +35 °C, 7 days | N/D |
| +35 °C, 21 days | Reduced homogeneity |
| +45 °C, 3 days | N/D |
| +45 °C, 7 days | Reduced immunoreactivity |

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody. Please note that the shelf life given on the first page is based on real time stability testing at 2-8 °C in the product buffer.

Miscellaneous

Antibody recognizes native CEA antigen, Lee Biosolutions 151-09 and 151-10.

In Bhayana et al. (1989) authors made an epitope mapping for 11 monoclonal antibodies from Medix Biochemica and they found that the antibodies bound to 5 different epitope groups (A to F) and 5905 was found to bind to epitope group A.

References

Bhayana, V. and Diamandis, E.P. (1989) A double monoclonal time-resolved immunofluorometric assay of carcinoembryonic antigen in serum. Clin. Biochem., 22:433-438