

# Technical Information

## M65 EpiDeath<sup>®</sup> ELISA (PEVIVA<sup>®</sup>)

Measurement of total cell death (apoptosis + necrosis) of human intermediate filament protein keratin 18 (K18) released from human epithelial cells.

CE

Cat. No.: 10040  
Tests: 96  
Method: ELISA  
Range: 200 – 5000 U/l (1 U/l = 1 .24 pmol).  
LLOD: 25 U/l  
Incubation time: 4.5 hours  
Sample volume: 25 µl  
Sample type: serum, plasma (EDTA, Heparin, Citrate) and cell cultures (epithelial cell)

Sample preparation: Store samples at 2 – 8 °C up to 4 hours. For longer periods, store samples frozen at -20 °C or lower.  
Samples can be freeze-thawed without loss of activity, it is recommended that repeated freeze thawing should be avoided.

Reference values: 200 normal subjects, 95th percentile 266 U/L

Total soluble K18 (uncleaved and cleaved Keratin 18 representing total cell death (necrosis and apoptosis) was measured in 200 apparently normal Swedish blood donors. Male and female values showed a similar distribution and no age dependency. Based on the distribution the recommended cut-off value for elevated K18 has been set at > 200 U/L.

Species: Human, primates

## Intended Use:

Quantitative measurement of total soluble keratin 18 (K18) released from dead cells (necrotic and apoptotic). The cells or tissues should be of human epithelial origin (e.g. kidney, gut, colon, lung or liver) expressing K18.

The M65 EpiDeath® ELISA can be combined with the M30 Apoptosense® ELISA (PEVIVA Prod. No. 10010) for determination of cell death mode (apoptosis versus necrosis). Death mode can be determined in vitro and in serum from cancer patients.

### \*Note:

caspase-cleaved K18 = ccK18 previously Cytokeratin 18 (CK18/ccCK18)

## References:

- Kramer G, *et.al.*, (2004) Differentiation between Cell Death Modes using Measurements of Different Soluble Forms of Extracellular Cytokeratin 18. *Cancer Research* 64: 1751-1756.
- Olofsson M, *et al.*, (2007) Cytokeratin-18 is a useful serum biomarker for early determination of response of breast carcinomas to chemotherapy. *Clin Cancer Res.* 13: 3198-3206.
- Hägg *et al.*, (2002) A novel high through put assay for screening of pro apoptotic drugs. *Invest New Drugs.* 20:253
- Olofsson *et al.*, (2009) Specific demonstration of drug-induced tumour cell apoptosis in human xenografts models using a plasma biomarker. *Cancer Biomark.* 5:117
- Greystoke *et al.*, (2008) Optimisation of circulating biomarkers of cell death for routine clinical use. *Ann Oncol.* 19:990
- Linder *et al.*, (2010) Utilization of cytokeratin-based biomarkers for pharmacodynamic studies. *Expert Rev Mol Diagn* 10:353.

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