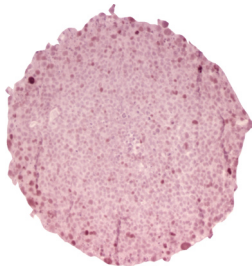

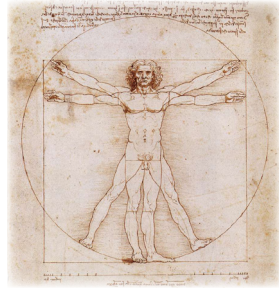
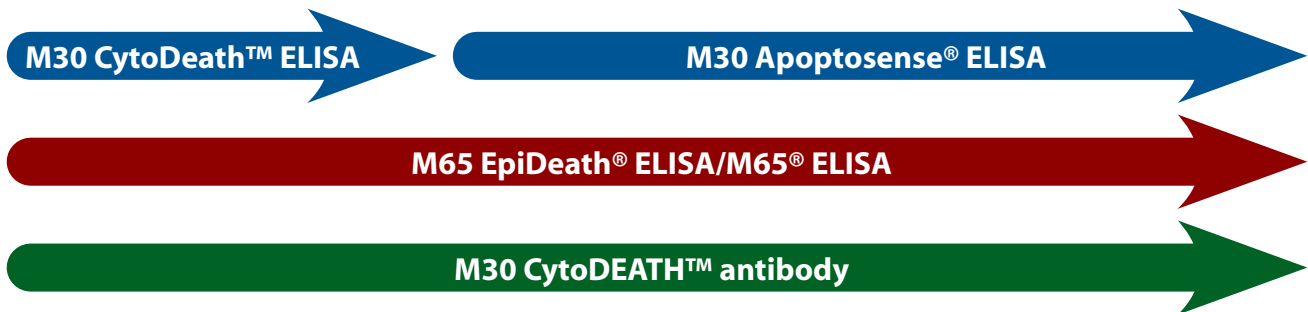


# Peviva Cell Death Products





PEVIVA has developed unique products for *in vitro* and *in vivo* studies of cell death. These products constitute a toolbox for translational apoptosis research. The M30 Apoptosense® ELISA enables the determination of epithelial cell apoptosis in plasma or serum. The M65 EpiDeath® ELISA and M65® ELISA determine total cell death by any cause (apoptosis + necrosis). The M30 CytoDeath™ ELISA is used to measure apoptosis in cultured cells.

<p><b>Cell cultures</b> Multicellular spheroids and monolayer cell cultures</p> 	<p><b>Human xenografts in mice</b> Detection of tumor cell death in plasma and tissue</p> 	<p><b>Clinical studies</b> Detection of tumor cell death in serum/plasma and tissue</p> 
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## M30:M65 ratios indicate cell death mode

The ratios between the M30 levels (M30 Apoptosense® ELISA or M30 CytoDeath™ ELISA, measuring caspase-cleaved keratin 18 (ccK18)) and the M65 levels (M65 EpiDeath® ELISA or M65® ELISA, measuring total keratin 18 (K18)) reflect the cell death mode. The amount of apoptosis (M30) is compared to the amount of total cell death (M65) by calculating the M30:M65 ratio. High M30:M65 ratios indicate that the cell death is mainly due to apoptosis. In contrast, low M30:M65 ratios suggest necrosis is the predominant cause of cell death.

<p><b>Apoptosis</b></p> <p>M30 level </p> <p>M65 level </p> <p>High levels of caspase-cleaved K18 (ccK18) compared to total K18 (high M30:M65 ratio)</p>	<p><b>Necrosis</b></p> <p>M30 level </p> <p>M65 level </p> <p>Low levels of caspase-cleaved K18 (ccK18) compared to total K18 (low M30:M65 ratio)</p>
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## M30 Apoptosense® ELISA

CE

The M30 Apoptosense® ELISA is a unique biomarker assay that allows determination of epithelial cell apoptosis in blood samples. The assay is based on the unique M30 antibody which recognizes a neo-epitope of keratin 18 (K18) formed after caspase cleavage. The assay detects caspase-cleaved K18 from human and monkey, but not the mouse, rat or canine protein. The M30 Apoptosense® ELISA measures tumor and liver apoptosis in human blood and is specific for human tumor apoptosis in

xenograft models. The assay has been used for different applications in the fields of oncology (response to cancer therapy in preclinical and clinical research), hepatology (hepatitis B/C, and alcoholic/non-alcoholic steatohepatitis (ASH/NASH)), and transplantation medicine (graft-versus-host disease). The assay can be combined with the M65 EpiDeath® ELISA for the analysis of cell death mode (necrosis or apoptosis).

## M65 EpiDeath® ELISA

CE

The M65 EpiDeath® ELISA is an updated version of the M65® ELISA and measures total K18 in patient serum/plasma or cell culture samples. K18 concentrations reflect total cell death (regardless of death mode) of epithelial cells. The assay is used for monitoring of cell death in tumors or the liver. The M65 EpiDeath® ELISA is specific to K18 from human or monkey and can

therefore specifically detect tumor cell death in mice/rats carrying human tumor xenografts. In persons without tumors, the main source of K18 is the liver, and K18 levels reflect hepatocyte cell death. The assay can be used in combination with the M30 Apoptosense® ELISA in order to quantify cell death mode (apoptosis or necrosis).

## M65® ELISA

CE

The M65® ELISA is the forerunner to the M65 EpiDeath® ELISA and is used to determine total epithelial cell death. Cell death mode (apoptosis or necrosis) can be determined by the com-

bined use of the M65® ELISA and the M30 Apoptosense® ELISA. It is a biomarker for *in vitro* and *in vivo* studies using cell supernatant, serum or plasma samples.

## M30 CytoDeath™ ELISA

The M30 CytoDeath™ ELISA is intended for cell culture applications. Similar to the M30 Apoptosense® ELISA, this assay is based on the unique M30 antibody. The sensitivity and range of the assay have been optimized for *in vitro* applications (the

assay is not suitable for serum/plasma samples). The M30 CytoDeath™ ELISA is a versatile tool to determine apoptosis in *in vitro* studies using monolayer cell cultures, multicellular spheroids or organ cultures.

## M30 CytoDEATH™ antibody

The M30 CytoDEATH™ antibody is used for the detection of epithelial cell apoptosis by immunohistochemistry in formalin-fixed paraffin-embedded or frozen tissue, flow cytometry or western blotting. It detects caspase-cleaved human, monkey and bovine K18 (but not the mouse, rat or canine protein). The M30 CytoDEATH™ mouse monoclonal antibody is available unlabeled, conjugated with biotin or fluorescein, or with red or orange dye.

## M5 and M6 Keratin 18 antibodies

The M5 and M6 Keratin 18 mouse monoclonal antibodies bind to conventional epitopes on Keratin 18 between the caspase-cleavage sites aa238 and aa396. The antibodies are used for staining of epithelial cells by immunohistochemistry and for western blotting. The M5 Keratin 18 is specific for the human and monkey protein, whereas the M6 Keratin 18 also binds to mouse, rat and dog K18.

## References

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For further, up-to-date information and to order, please visit [www.peviva.se](http://www.peviva.se).



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