

M30 Apoptosense® ELISA

Apoptosis Biomarker Assay

Catalog Prod. No. 10011

In USA, Canada and Japan: For research and laboratory use only. Not for human or diagnostic use.

General Information

Analyte:	<p>Soluble human intermediate filament protein fragments of keratin 18 (K18) [ccK18 (caspase-cleaved Cytokeratin-18)] that contain the M30 neo-epitope (K18Asp396-NE).</p> <p>The M30 neo-epitope (K18Asp396-NE), is a sensitive and integrative indicator specific for epithelial cell death involving caspase-3, -7 or -9 activation.</p>
Intended Use:	<p>Quantitative measurement of total soluble cytokeratin 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.</p> <p>The M30 Apoptosense® ELISA may be combined with the M65® ELISA (PEVIVA Prod. No. 10020) for the determination of cell death mode (apoptosis versus necrosis).</p>
Samples:	<p>Human serum or plasma (EDTA, Citrate, Heparin plasma), containing K18Asp396-NE (M30)-reactive material released from apoptotic K18 positive human cells. Multiple freeze-thaw cycles of samples are well tolerated.</p> <p>NOTE! The same type of material i.e. serum or plasma collected by one method should be used for a specific project.</p>
Interfering Substances:	<p>The assay is not sensitive to highly elevated hemoglobin levels (< 100 mg/dL), highly elevated triglyceride levels (< 1 250 mg/dL) or highly elevated bilirubin levels (< 12.5 mg/dL) allowing the analysis of even grossly haemolyzed, hyperlipidemic or icteric blood samples.</p>
Sample Volume:	<p>2 × 25 µL (duplicate samples).</p>
Sample Stability:	<p>Fresh samples are stable for up two days at 2–8 °C, for at least 9 months at -20 °C; and for at least two years when stored at -80 °C.</p>
Number of Tests:	<p>96 determinations: 7 Standards, 2 Controls and 39 samples in duplicates.</p>
Reagent Storage:	<p>2–8 °C. Do not freeze!</p>
Assay Time:	<p>270 min (approx.).</p>
References:	<ul style="list-style-type: none">■ Linderholm BK, et al.; (2013) <i>Identification of intermediate risk breast cancer patients with 1-3 positive lymph nodes and excellent survival after tamoxifen as only systemic adjuvant therapy by use of markers of proliferation and apoptosis</i>. Breast. 22:643-9■ De Petris L, et al.; (2011) <i>Diagnostic and prognostic role of plasma levels of two forms of cytokeratin 18 in patients with non-small-cell lung cancer</i>. Eur J Cancer. 47:131-7■ Linder S, et al.; (2010) <i>Utilization of cytokeratin-based biomarkers for pharmacodynamic studies</i>. Expert Rev Mol Diagn. 10:353-9 Review.■ Brandt D, et al.; (2010) <i>Serum biomarkers of cell death for monitoring therapy response of gastrointestinal carcinomas</i>. Eur J Cancer. 46:1464-73■ Herrmann R, et al. (2008) <i>Screening for compounds that induce apoptosis of cancer cells grown as multicellular spheroids</i>. J Biomol Screen. 13:1-8■ Olofsson MH, et al.; (2007) <i>Cytokeratin-18 is a useful serum biomarker for early determination of response of breast carcinomas to chemotherapy</i>. Clin Cancer Res. 13:3198-206■ Kramer G, et al.; (2006) <i>Docetaxel induces apoptosis in hormone refractory prostate carcinomas during multiple treatment cycles</i>. Br J Cancer. 94:1592-8■ Bivén K, et al.; (2003) <i>A novel assay for discovery and characterization of pro-apoptotic drugs and for monitoring apoptosis in patient sera</i>. Apoptosis. 8:263-8

Performance Characteristics

Calibration:	The units measured by the M30 Apoptosense® ELISA are defined against a synthetic peptide containing the M30 and M5 monoclonal antibody epitopes. 1 U/L = 1.24 pM.
Working Range:	75 – 1 000 U/L
Detection Limit:	20 U/L, Standard A (0 U/L) + 2 S.D.
Reproducibility:	Intra-Assay (WA) Precision: CV < 10 % for values > 100 U/L. Inter-Assay (BA) Precision: CV < 10 % for values > 100 U/L.
Hook Effect:	No high dose “hook effect” occurs before 50 000 U/L which is well above concentrations of K18Asp396-NE (M30)-reactive material observed in human blood samples.

Reagents

Coated Microstrips:	One Microplate, 96 dry wells (12 strips × 8 wells). The wells are coated with mouse monoclonal anti-K18 antibody M5.
HRP Conjugate:	Concentrate. One vial containing mouse monoclonal M30 antibody (anti-K18Asp396-NE) conjugated to horseradish peroxidase (HRP).
Conjugate Dilution Buffer:	One vial containing phosphate buffer with protein stabilizers.
Standards A – G:	The values of the Standards A – G are 0, 75, 150, 250, 500, 750 and 1 000 U/L, respectively.
Control Low and High:	Two vials containing M30-reactive recombinant standard material.
TMB Substrate:	One vial containing TMB (3,3',5,5'-Tetramethylbenzidine) Solution.
Stop Solution:	One vial containing 1.0 M sulfuric acid.
Wash Tablet:	One tablet for preparation of Wash Solution.

PEVIVA Products from VLVbio

M30 Apoptosense® ELISA Prod. no. 10011	M65® ELISA Prod. no. 10020	
M30 CytoDeath™ ELISA Prod. no. 10900	M65 EpiDeath® ELISA Prod. no. 10040	M65 EpiRat™ Prod. no. 10060

For further information, please visit www.vlvbio.co.uk - order online at www.bioaxxess.co.uk

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