SeleCTEV™ DNA Enrichment Kit CE IVD

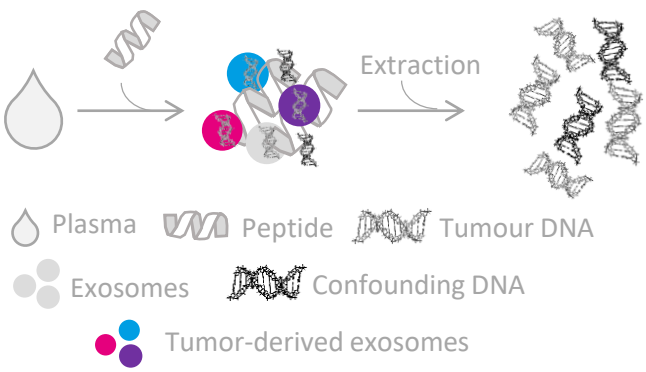
From plasma to DNA - This kit allows the purification of both circulating free DNA (cfDNA) and tumor-derived exosome DNA.

Technical Specifications

Category	Pre-analytical
Isolation Method	Exosomics proprietary peptide affinity method
Sample type	Plasma
Number of reactions	24 reactions
Sample Volume	From 0,5 ml up to 7 ml
	0,5-2 ml: SeleCTEV Low Volume (Cat. No. EXO-SEL-LV)
	2-7 ml: SeleCTEV High Volume (Cat. No. EXO-SEL-HV)

How to order your kit: https://www.exosomics.it/product-category/pre-analytical/
or contact us at orders@exosomics.eu for more information

HOW IT WORKS



-Peptide affinity purification;

-Exosome isolation and DNA extraction workflows combined;

-Peptide pulls down tumour-derived exosomes and circulating DNA;

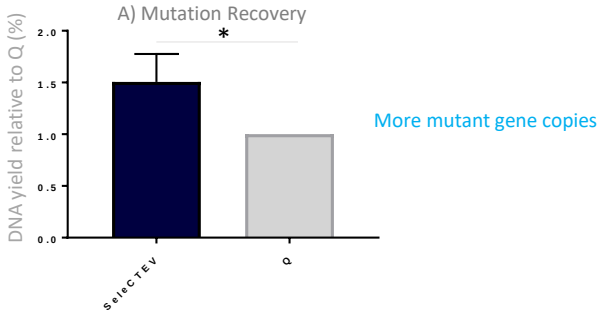
-Best pre-analytical method to harvest as much as possible DNA from biofluids;

-It's easy, does not require complex ultracentrifugation or chromatography steps;

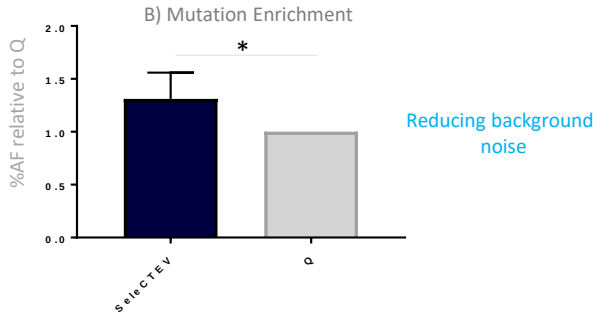
-Enables better downstream analytical performance.

Key Performance metrics #1: SeleCTEV™ – Mutation Recovery & Enrichment

Plasma from healthy donor patient were spiked with melanoma derived BRAF V600E-positive exosomes processed with either SeleCTEV™ or Competitor Q to obtain DNA. Such DNA was then tested for BRAF V600E (A) and BRAF WT (B) by ddPCR (Biorad®).



More mutant gene copies



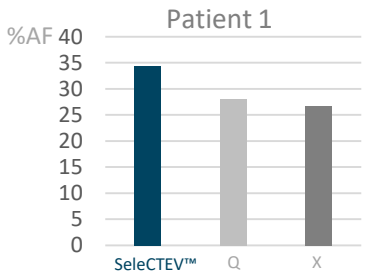
Reducing background noise

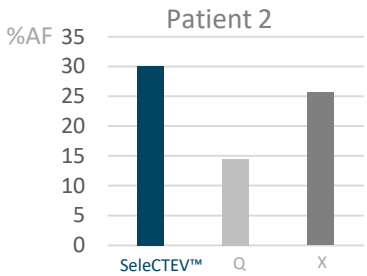
A) The Y-bar represents the BRAF V600E copies per µl recovered by SeleCTEV™ or Competitor Q in a final elution volume of 20 µl. BRAF V600E copies concentration increases by an average of 30% with SeleCTEV™ comparison to competitor Q.

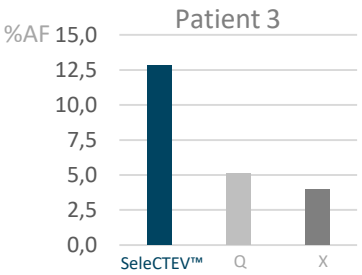
B) The Y-bar represents BRAF V600E allelic frequency (AF) expressed as percentage obtained by SeleCTEV™ or Competitor Q. Mutation AF increased with SeleCTEV™ comparison to competitor Q by an average of 21%.

Case study #1: SeleCTEV™ – Metastatic Melanoma Patients, BRAF V600E detection

Plasma from three metastatic melanoma patients with BRAF V600E mutation was processed with SeleCTEV™, Company X or Competitor Q to obtain DNA. Such DNA was then tested for BRAF V600E by ddPCR (BioRad®).



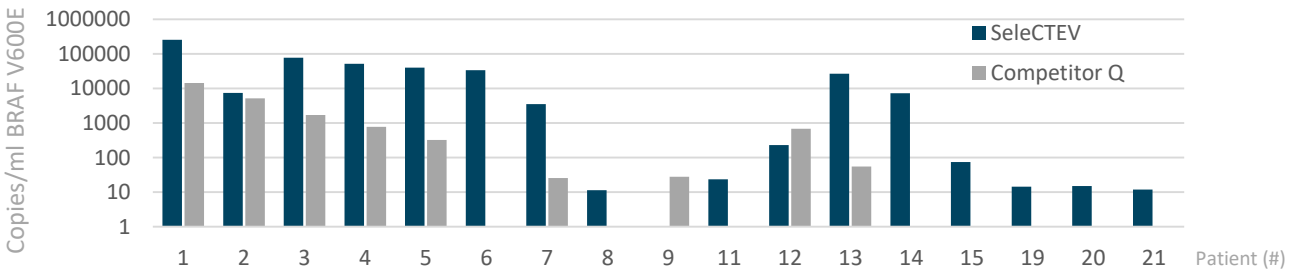




The bar represents the % of allelic frequency (%AF) of BRAF V600E detected. For all three patients the use of SeleCTEV™ as the pre-analytical step yielded tumour-enriched DNA as shown by a higher allelic frequency. Note that the lower is the allelic frequency in the patient the bigger is the difference between SeleCTEV™ and the competitors. This suggests the SeleCTEV™ performs better by increasing the signal to noise ratio especially in cases when the copy number of mutated DNA molecules is low and confounding background is high. Data generated by Company X, Belgium.

Case study #2: SeleCTEV™ – Metastatic Melanoma Patients, BRAF V600E detection

Plasma from twenty-one metastatic melanoma patients was processed with either SeleCTEV™ or Competitor Q to obtain DNA. Such DNA was then tested for BRAF V600E by dPCR (Thermo®).



The bar represents the number of copies of BRAF V600E DNA detected. For almost all but 2 patients, the use of SeleCTEV™ as the pre-analytical step yielded a higher number of copies of DNA mutated for BRAF V600E. In seven cases SeleCTEV™ could detect the mutation whilst the competitor not. Data generated by University of Brescia, Italy, manuscript in preparation.

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