

des-Arginine Bradykinin (DABk)

Method:	Liquid Chromatography-Tandem Mass Spectrometry (LC/MS/MS)
Description:	<p>Bradykinin (Kallidin I or 9) is a nonapeptide and a kinin generated from kininogen by the action of protease during tissue injury; conversely with angiotensin II, bradykinin promotes blood vessel dilation and a lowering of blood pressure considered to play a part in inflammatory processes and a relevant role in COVID-19. Bradykinin is degraded in human plasma by a carboxypeptidase to yield a metabolite of desArg9-bradykinin (DABK).</p> <p>Kinin peptide metabolism is an important determinant of kinin levels in blood and tissue. The assessment on metabolites bradykinin (DABK and BADK) are useful for understanding inflammatory processes and pathophysiology of COVID-19 related to the Kallikrein–Kinin (KKS), the Coagulation/Fibrinolysis, and the Renin–Angiotensin (RAS) Systems.</p> <p>Bradykinin metabolites of DABK and BADK in human plasma/serum are extracted by Protein Precipitation (PP) followed by Solid Phase Extraction (SPE), separated and eluted by High Performance of Liquid Chromatography (HPLC), and determined by Mass Spectrometry (MS) in Electrospray Ionization (ESI) source at positive ionization mode with multiple reaction monitoring (MRM) of transitions. Stable isotope labeled DABK, are utilized as internal standards for the calibration of the DABK metabolite assay.</p>

Collection and Performance Characteristics

Tube type:	Preferred: SST Alternate: Plasma
Minimum Volume:	0.5 mL
Special Processing Considerations	Avoid repeated freeze-thaw cycles Store at -80°C until analysis is performed
Lowest Reportable Value:	20 pg/mL
Dynamic range:	20 – 5000 pg/mL
Precision:	Intra-assay variation is 4.5 – 9.1% Inter-assay variation is 4.1 – 13.6%
Reference Range:	Unknown