abcam

Product datasheet

Human SOST ELISA Kit ab221836

Recombinant SimpleStep ELISA

2 References 7 Images

Overview

Product name Human SOST ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			4.8%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			8.6%

Sample type Serum, Cell culture media, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 6 pg/ml

Range 31.1 pg/ml - 2000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	106	104% - 109%
Cell culture media	117	113% - 121%
EDTA Plasma	97	95% - 99%
Cit plasma	108	104% - 114%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Does not react with: Cow

Product overview

Human SOST ELISA Kit (ab221836) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of SOST protein in cell culture media, cit plasma, edta plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human SOST with 6 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

Sclerostin is a secreted protein important in regulation of bone growth. Sclerostin (SOST) is widely expressed and can be found at higher levels in bone, cartilage, kidney, liver and bone marrow. Mutations in the SOST gene can lead to various diseases including Van Buchem disease (VBCH) and Craniodiaphyseal dysplasia autosomal dominant (CDD)).

Platform

Microplate (12 x 8 well strips)

Properties

Storage instructions

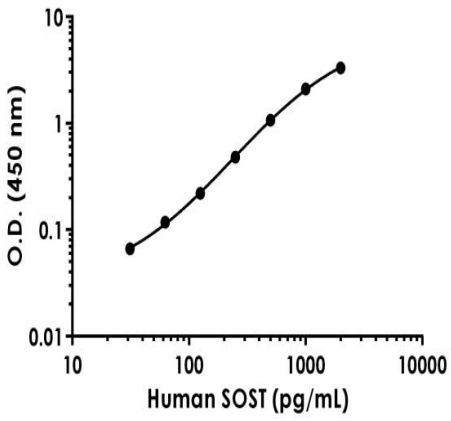
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	1 x 96 tests
10X Human SOST Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
Antibody Diluent CPI2	1 x 6ml	1 x 6ml
Human SOST Capture Antibody (lyophilized)	1 vial	1 vial
Human SOST Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 50ml	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	1 unit
Stop Solution	1 x 12ml	1 x 12ml

Components	1 x 96 tests	1 x 96 tests
TMB Development Solution	1 x 12ml	1 x 12ml

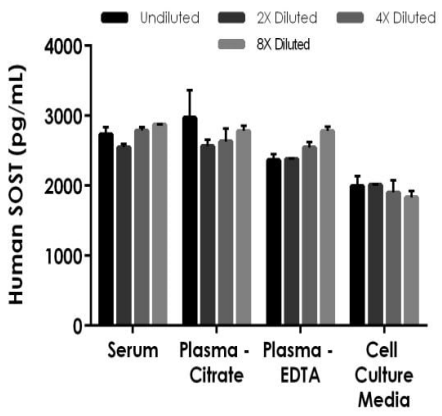
Function	Negative regulator of bone growth.
Tissue specificity	Widely expressed at low levels with highest levels in bone, cartilage, kidney, liver, bone marrow and primary osteeoblasts differentiated for 21 days.
Involvement in disease	Defects in SOST are the cause of sclerosteosis (SOST) [MIM:269500]; also known as cortical hyperostosis with syndactyly. SOST is an autosomal recessive sclerosing bone dysplasia characterized by a generalized hyperostosis and sclerosis leading to a markedly thickened skull, with mandible, ribs, clavicles and all long bones also being affected. Due to narrowing of the foramina of the cranial nerves, facial nerve palsy, hearing loss and atrophy of the optic nerves can occur. Sclerosteosis is clinically and radiologically very similar to van Buchem disease, mainly differentiated by hand malformations and a large stature in sclerosteosis patients. Note=A 52 kb deletion downstream of SOST results in SOST transcription suppression and is a cause of van Buchem disease (VBCH) [MIM:239100]; also known as hyperostosis corticalis generalisata. VBCH is an autosomal recessive sclerosing bone dysplasia characterized by endosteal hyperostosis of the mandible, skull, ribs, clavicles, and diaphyses of the long bones. Affected patients present a symmetrically increased thickness of bones, most frequently found as an enlarged jawbone, but also an enlargement of the skull, ribs, diaphysis of long bones, as well as tubular bones of hands and feet. The clinical consequence of increased thickness of the skull include facial nerve palsy causing hearing loss, visual problems, neurological pain, and, very rarely, blindness as a consequence of optic atrophy. Serum alkaline phosphatase levels are elevated.
Sequence similarities	Belongs to the sclerostin family. Contains 1 CTCK (C-terminal cystine knot-like) domain.
Cellular localization	Secreted.

Images



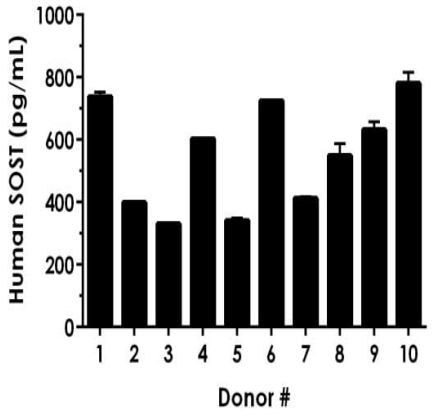
Human SOST standard curve

Example of human SOST standard curve. Background-subtracted data values (mean +/- SD) are graphed.



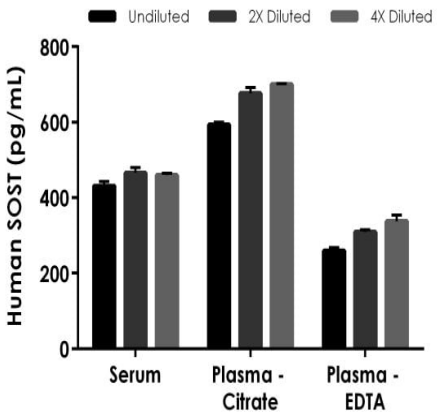
Interpolated concentrations of spike SOST in human serum, plasma and cell culture supernatant samples

Interpolated concentrations of spiked SOST in human serum, plasma and cell culture supernatant samples. The concentrations of SOST were measured in duplicates, interpolated from the SOST standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (EDTA) 50% and cell culture media 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).



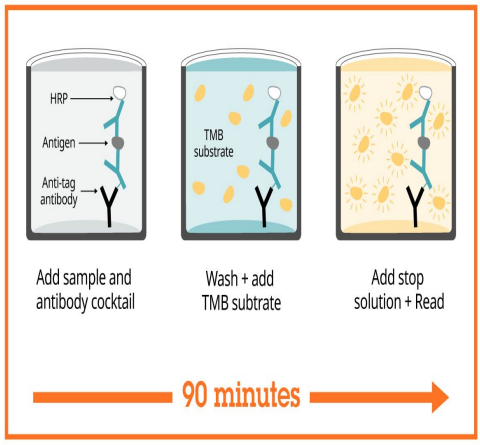
Serum from ten individual healthy human female donors was measured in duplicate

Serum from ten individual healthy human female donors was measured in duplicate. Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean SOST concentration was determined to be 552 pg/mL with a range of 331 – 781 pg/mL.



Interpolated concentrations of native SOST in human serum and plasma samples

Interpolated concentrations of native SOST in human serum and plasma samples. The concentrations of SOST were measured in duplicates, interpolated from the SOST standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, and plasma (EDTA) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean SOST concentration was determined to be 452.2 pg/mL in serum, 657 pg/mL in plasma (citrate) and 302 pg/mL in plasma (EDTA).

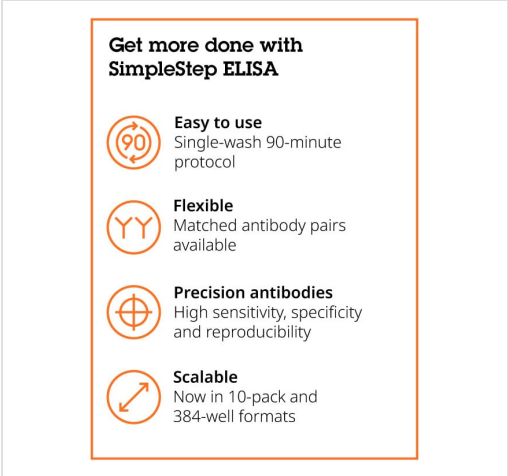


Sandwich ELISA - Human SOST ELISA Kit (ab221836)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Sandwich ELISA - Human SOST ELISA Kit (ab221836)

To learn more about the advantages of recombinant antibodies see **here**.



Sandwich ELISA - Human SOST ELISA Kit (ab221836)

To learn more about the advantages of SimpleStep ELISA® kits see **here**.

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