SibTech, Inc.

scVEGF/Si

SBT302

The scVEGF/Si tracer is based on 28-kDa single chain vascular endothelial growth factor (scVEGF, SibTech product #SBT301) that consists of two 3-112aa fragments of human VEGF cloned head-to-tail and fused to an N-terminal Cys-tag. Cys-tag is 1-15aa fragment of human RNase I with the R4C amino acid substitution. The scVEGF sequence has 242 amino acids. Exact mass: 27808.87003. Formula: C1190 H1856 N346 O364 S31. Isoelectric Point: 5.88

scVEGF/Si tracer carries single Cy5.5 moiety (FW 1128, GE Healthcare) attached site-specifically to C4 residue of Cys-tag. The protein and dye concentrations are calculated using integral absorption in analytical RP-HPLC profiles at 214 nm and 678 nm, respectively.

One vial contains 150 µg (5.4 nmol) of lyophilized scVEGF/Si.

Reconstitution: in 50-100 µl of sterile PBS or saline.

***In vivo* imaging:** For imaging VEGF receptors in mouse tumor neovasculature, inject 100 µl scVEGF/Si at concentrations ranging from 2.5 to 10 µM via the tail vein, 10-30 min prior to imaging. Best results are obtained with small tumors. Mice with fur: shave and remove fur using any hair removal lotion in and around the imaging area. Nude mice: position tumor as far as possible from kidney, liver, stomach area. For more information, please visit www.sibtech.com. To discuss imaging in your animal model, please call SibTech for technical support (203-775-5677).

Purity: This essentially salt-free, chromatographically purified preparation is >98% pure. scVEGF/Si migrates as a single band with an apparent molecular weight of 29,000 Da in reducing SDS-PAGE.

Functional activity in tissue culture: The ability of scVEGF/Si to bind to and activate VEGF receptor VEGFR-2 is tested *in vitro* on 293/KDR human transformed embryonic kidney cells expressing $2.5x10^5$ VEGFR-2/cell. Relative to unmodified scVEGF, scVEGF/Si displays more than 90% VEGF activity.

Stability: lyophilized scVEGF/Si is shipped at ambient temperature. It is stable for at least one week at ambient temperature. For long-term storage it should be kept at –70 °C. If stored at -20 ^{o}C for several months, Cy5.5 moiety tends to aggregate at the bottom of the tube. This does not affect scVEGF activity. scVEGF/Si retains functional activity after storage for at least 6 months at –20 °C. Upon reconstitution, repeated freezing-thawing should be avoided.

Handling:

Good laboratory technique should be employed in the safe handling of this product. This requires observing the following practices:

1. Wear lab coat, gloves and safety glasses
2. Do not mouth pipette, inhale, ingest or allow to come into contact with open wounds. Wash thoroughly any area of the body which comes into contact with scVEGF/Si
3. Avoid accidental autoinjection by exercising extreme care when handling in conjunction with any injection device.
4. scVEGF/Si is intended for research purposes only. NOT FOR HUMAN USE.
5. SibTech, Inc. is not liable for any damages resulting from the misuse or handling of scVEGF/Si

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