

SibTech, Inc.

ctEGF-PEG-DOTA

Product #SBT235

ctEGF-PEG-DOTA conjugate is based on ctEGF (Sibtech product #SBT200).

Synthesis: The conjugate is synthesized by site-specific conjugation of chelator p-NH₂-Bn-DOTA (S-2-(4-Aminobenzyl)-1,7,10-tetraazacyclododecane tetraacetic acid, Macrocyclics, Dallas, TX) to C4 residue of Cys-tag *via* 3.4-kDa Mal-PEG-NHS (Creative PEGworks, Winston Salem, NC). ctEGF-PEG-DOTA is purified by RP-HPLC to >95% and lyophilized from 20 mM ammonium bicarbonate.

Functional activity in tissue culture: The ability of ctEGF to bind to EGF receptor is tested *in vitro* on MDA-231Luc human breast cancer cells (SibTech product #SBT093.MDA). Relative to unmodified ctEGF, ctEGF-PEG-DOTA displays 95-100% EGF activity.

Radiolabeling for PET and SPECT imaging: ctEGF-PEG-DOTA can be radiolabeled with PET and SPECT imaging radionuclides, such as ⁶⁴Cu, ⁶⁸Ga, and ^{99m}Tc, using protocols developed for DOTA-containing tracers (1, 2).

One vial contains 0.1 mg of essentially salt-free lyophilized ctEGF-PEG-DOTA

Reconstitution: To insure full recovery, centrifuge the vial briefly before opening. Reconstitute in 0.1 ml of a buffer of your choice, to a final concentration of 1 mg/ml. We do not recommend using less than 0.1 ml for reconstitution.

Stability: Lyophilized ctEGF-PEG-DOTA is stable for 1 year at -20°C. After reconstitution, it is stable and functionally active for at least 6 months, if stored at -20°C or below. Multiple thawing-freezing should be avoided.

Safety warnings: For research use only. Not for human use. Not recommended or intended for diagnosis in humans or animals. As all chemicals should be considered as potentially hazardous, it is advisable to wear suitable protective clothing, such as laboratory overalls, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water.

References

1. Levashova Z, Backer M, Horng G, Felsher D, Backer JM, Blankenberg FG. SPECT and PET Imaging of EGF Receptors with Site-Specifically Labeled EGF and Dimeric EGF. *Bioconjug. Chem.* 20, 742–749, 2009.
2. Backer MV, Levashova Z, Levenson R, Blankenberg FG, Backer JM. Cysteine-containing fusion tag for site-specific conjugation of therapeutic and imaging agents to targeting proteins. *Methods in Molecular Medicine. Peptide-based Drug Design.* Humana Press, New York, NY. Ed: L. Otvos. Vol. 494, p.275-94, 2008.