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Staphylococcal Enterotoxin B

National Cancer Institute

Source

National Cancer Institute. *Staphylococcal Enterotoxin B*. NCI Thesaurus. Code C1084.

A bacterial enterotoxin with potential immunostimulatory activity. Staphylococcal enterotoxin B (SEB), a gram positive superantigen produced by *Staphylococcus aureus*, is a potent stimulator of T-cell activation. SEB binds directly to class II major histocompatibility complex (MHC) molecules and the V beta region of the T-cell receptor (TCR), leading to an amplified T-cell response. In response to SEB, both CD4+ and CD8+ cells proliferate, secrete cytokines and demonstrate enhanced cytotoxic activity against a broad range of antigens. Co-administration of SEB with interleukin-2 (IL-2) by direct injection into tumor cells, may induce clonal T-cell expansion and potentiate apoptosis of tumor cells, resulting in decreased tumor growth.