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Recombinant EphB4-HSA Fusion Protein

National Cancer Institute

Source

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A recombinant fusion protein composed of the full-length extracellular domain (soluble) of human receptor tyrosine kinase ephrin type-B receptor 4 (sEphB4) and fused, at its C-terminus, to full-length human serum albumin (HSA), with potential antineoplastic and anti-angiogenic activities. sEphB4-HSA functions as a decoy receptor for the membrane-bound ligand Ephrin-B2 (Efnb2) and interferes with the binding of Efnb2 to its native receptors, including EphB4 and EphA3. This may result in a reduction of angiogenesis and a reduction in cell growth of Efnb2 and/or EphB4 over-expressing tumor cells. In addition, this agent also prevents the angiogenic effects of numerous growth factors due to interactions between Efnb2 and EphB4. Efnb2 and EphB4 are overexpressed in a variety of tumor cell types; the bi-directional signaling of Efnb2-EphB4 plays an important role in angiogenesis and tumor cell migration, invasion, and proliferation. Albumin reduces this agent's degradation, improves circulation time and may thus improve efficacy.