



Product Datasheet

Product Name	Angiopoietin-2 Human Recombinant
Cata No	CB500316
Source	<i>Insect Cells</i>
Synonyms	ANGPT2, Tie2-ligand, Ang-2, AGPT2, angiopoietin-2B, angiopoietin-2a, Angiopoietin-2.

Description

The Angiopoietins are a family of growth factors which bind to the endothelial receptor tyrosine kinase Tie2. Angiopoietin-1, 4 activate the Tie2 receptor, whereas Angiopoietin-2, 3 inhibit Angiopoietin-1-induced Tie2 phosphorylation. Ang-1 Human is a secreted growth factor which enhances endothelial cell survival and capillary morphogenesis, also it limits capillary permeability. Ang-2 is a natural inhibitor of Ang-1 because it binds the same receptor but fails activate it. When ambient levels of VEGF are high Angiopoietin-2 destabilizes capillary integrity, facilitating sprouting but when VEGF levels are low it causes vessel regression. Although Tie-1 and Tie-2 homologues but Tie-1's ligands are unknown. The mammalian metanephros (precursor of the adult kidney) is the local where Angiopoietin and Tie genes are expressed. These genes may play a role in endothelial precursor growth. When the metanephros first forms Tie-1-expressing cells can be detected. Ang-1 (podocyte-derived) and Ang-2 (mesangial-cell-derived) may affect growth of nascent capillaries during glomerular maturation. The descending limbs of loops of Henle in the mature vasa rectae (after birth) express Angiopoietin-2 which affects the growth of this medullary microcirculation. As gathered from recent data, angiopoietins are implicated in unregulated vessel growth in Wilms' kidney tumors and in vascular remodeling after nephrotoxicity. During

vascular development VEGF-A and Angiopoietins not only have different roles, but also complementary and coordinated roles. Angiopoietin-2 (Ang-2) Human, a 66 kDa protein consisting of 476 amino acid residues (N21-F496), is fused to a N-terminal myc-tag and produced in insect cells.

Physical Appearance

Sterile Filtered white lyophilized freeze dry powder.

Biological Activity

The biological activity of Angiopoietin-2 was determined by the induction of endothelial cell sprouting as described in Korff et al., 2001.

Purity

The purity of Ang-2 Human is greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

Ang-2 Human is formulated from a solution containing TBS & 0.05% CHAPS.

Stability

Lyophilized Angiopoietin-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Ang-2 Human Recombinant should be stored at 4°C between 2-7 days and for future use below -18°C.

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For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles. Product Datasheet

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