

TEM8/ANTXR1 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	ATR;TEM8;anthrax toxin receptor 1;GAPO
Protein Construction:	A DNA sequence encoding the human ANTXR1 (NP_115584.1) (Met1-Ser321) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 33
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9H6X2-1
Molecular Weight:	59.4 kDa (predicted); 69 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

ANTXR1 contains 1 VWFA domain and belongs to the ATR family. ATR (Ataxia telangiectasia and Rad3 related) and ATM (Ataxia telangiectasia mutated) are closely related kinases that are activated by DNA damage. They are serine-threonine protein kinases and belongs to the phosphatidylinositol 3' kinase-like kinase (PIKK) family. Upon recruitment by the DNA damage binding proteins/complexes (ATRIP for ATR; MRN for ATM), ATM/ATR initiate the DNA damage checkpoint by phosphorylating a number of key proteins. ANTXR1 interacts with extracellular matrix

proteins and with the actin cytoskeleton. It functions in cell attachment and migration. ANTXR1 also mediates adhesion of cells to type 1 collagen and gelatin, reorganization of the actin cytoskeleton and promotes cell spreading. It plays a role in the angiogenic response of cultured umbilical vein endothelial cells.

Reference

Chaudhary A, et al. (2012) TEM8/ANTXR1 blockade inhibits pathological angiogenesis and potentiates tumoricidal responses against multiple cancer types. *Cancer Cell*. 21 (2): 212-26.

Garlick KM, et al. (2012) Binding of filamentous actin to anthrax toxin receptor 1 decreases its association with protective antigen. *Biochemistry*. 51 (6): 1249-56.

St Croix B, et al. (2000) Genes expressed in human tumor endothelium. *Science*. 289 (5482): 1197-202.

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