

Technical Data Sheet

FUT-175 (Futhan)

Product Information

Material Number:	552035
Size:	5.0 mg
Storage Buffer:	Lyophilized powder

Description

FUT-175 (Futhan, or Nafamostat Mesilate, chemical name: 6-amidino-2-naphthyl p-guanidinobenzoate dimethanesulfonate) is a synthetic, broad-specificity protease inhibitor and an inhibitor of the classical and alternate pathways of complement activation. The molecular weight of Futhan is 539.58 Da.

Preparation and Storage

Store the lyophilized standard at 4°C prior to reconstitution.

Protect from light and moisture.

After reconstitution with dH₂O, Futhan is stable for 4 weeks if stored at 4°C and several months if stored at -80°C.

Application Notes

Recommended Assay Procedure:

Complement activation in vivo may initiate, contribute to, or exacerbate the inflammatory reactions seen in gram-negative bacterial sepsis, trauma, ARDS, ischemic heart disease, post-dialysis syndrome and several autoimmune diseases including rheumatoid arthritis, lupus erythematosus and acute glomerulonephritis. Although chelation of bivalent cations by EDTA prevents the activation of a number of plasma proteases, including the coagulation and complement pathways, it has been reported that cleavage of certain complement components still occurs. This makes in vitro measurements of the in vivo-generated cleavage products, such as C3a, C4a, or C5a, less accurate. Addition of FUT-175 (Futhan) to plasma samples at the time of sample collection provides additional protection from ex-vivo activation, and therefore ensures more accurate measurements that reflect the circulating levels of complement activation products.

Sample collection for anaphylatoxin measurements: Prior to use, reconstitute FUT-175 (Futhan) with 1 ml dH₂O to get a 100x stock solution. Avoid using PBS or other phosphate-containing buffers as it might reduce the solubility of FUT-175. Add 10 µl of FUT-175 (Futhan) stock per ml of freshly drawn EDTA blood (i.e. 100 µl FUT-175 (Futhan) stock/10 ml EDTA blood). Keep blood sample on ice, then spin and collect plasma. Proceed to C3a-desArg, C4a-desArg or C5a-desArg measurements using our OptEIA kits (Cat No. 550499, 550947, or 550500), or our mouse complement antibodies for ELISA (558250, 558251, 558618, 558027, 558028, 622597), or store samples at 4°C or frozen at -80°C for later evaluation. Alternatively, FUT-175 (Futhan) can act as a sample stabilizer when it is added at 10 µl/ml to plasma or serum samples. Our studies show that ex vivo generation of C4a-desArg in EDTA plasma samples is blocked up to 24 hours at 4°C or at RT, and up to 5 hours at 37°C, in the presence of the recommended concentration of FUT-175 (Futhan) (i.e. 50 µg/ml).

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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