



Marinomed Biotech AG is an Austrian biopharmaceutical company with extensive know-how in virology and immunology offering a variety of in-vitro and ex-vivo assays as well as pharmaceutical development services.

Toxicological studies

Cyto-tox	Various cell lines from various species and organs, e.g. Vero, L929, HCE-S,... or primary cells (PBMC, BMMC)
Hemolysis	On red blood cells

Immunological assays

T-cells	Jurkat cell lines, primary human cells/stimuli PMA-Iono/CD3-CD28 pathways/different cytokines
Dendritic cells	Cell line DC18C10/stimuli PMA-Iono, LPS/NF-kB pathway/TNF-alpha and other cytokines
Mast cells	CFTL-12, primary mouse cells/stimuli PMA-Iono, IgE-AG/calcineurin inhibitors (or clobetasol) for TNF-alpha, histamine release, other cytokines and chemokines

Antiviral activity assays

Hemagglutination inhibition	Influenza A viruses endemic and pandemic (e.g., H1N1, H3N2, H7N7) Influenza B virus (e.g., Yamagata) Human Coronavirus OC43 Human Parainfluenzavirus 3
Infectivity assay (single round)	SARS-CoV-2 Lentivirus pseudovirus (Wuhan and variants of concern)
Replication inhibition assay	Influenza virus A H1N1, H3N2, H5N1, H7N7 Human Rhinovirus major and minor group Coxsackie A10 + A24 Herpes simplex virus 1 +2
Neuraminidase inhibition	Various influenza viruses (RBC or biochemically)

Decongestion assays

FACS-analysis	Cell size determination
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Dehydration/moisturization assays

Cell assays	Product relevant cells and cell lines, e.g. HCE-S, A549...
Ex-vivo	Porcine eye – cornea Porcine nasal mucosa

Diffusion/barrier assay

In-vitro	For allergens, particles
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Permeation

In-vitro	PAMPA (cell-free system)
Ex-vivo	Porcine eyes (cornea, conjunctiva, aqueous humor, sclera, vitreous, retina,...) Porcine nasal mucosa (cavity, septum) Porcine stomach (fundus, corpus) Porcine oral cavity (lingual, buccal mucosa)

Pharmaceutical development (liquids)

Formulation	Solubility studies, formulation development, primary packaging compatibility
Physico-chemical parameters	Appearance (clarity and color), pH, conductivity
HPLC analytics	RP-HPLC various detection methods (CAD, DAD, UV/Vis, RI, fluorescence), method development, forced degradation studies
Stability studies	At 25°C/60%RH, 30°C/75%RH, 40°C/75%RH



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