

OPTIPREP™ APPLICATION SHEET INDEX

SUBCELLULAR MEMBRANES

- ◆ The Index is divided into three sections:
 - A.** General methods for preparing gradients; preparing crude organelle or membrane fractions and analysing the gradient separation
 - B.** An alphabetical subcellular membrane index. Membranes and organelles from tissues and cells from mammals and most higher eukaryotes are listed according to the membrane or organelle or subcellular process (e.g. endocytosis) .
 - C.** Membranes and organelles from protozoa, fungi, algae, plants etc are listed alphabetically according to the source.
- ◆ In some cases more than one Application Sheet for a specific membrane type may be provided if different practical strategies are available.
- ◆ **To open an Application Sheet click on the relevant [Application Sheet S--]**

A. GENERAL METHODS

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B. SUBCELLULAR MEMBRANES (MAMMALIAN)

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See “Plasma membrane domains”

Cytoplasmic vesicles

See “Protein localization (membrane *versus* cytosol)”

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See “Protein localization (membrane *versus* cytosol)”

Endocytosis analysis

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Endoplasmic reticulum

See “Membrane trafficking” for resolution of endoplasmic reticulum from other membrane compartments, e.g. plasma membrane, Golgi, *trans*-Golgi network, endosomes, ERGIC

Endoplasmic reticulum domains

Lipid droplets	[Application Sheet S41]
Mitochondria-associated	[Application Sheet S41]
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Endoplasmic reticulum - rough/smooth fractionation

Cultured cells (continuous gradients)

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Self-generated gradients

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Separation from Golgi

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Endosomes

See “Endocytosis analysis”

See “Membrane trafficking” for resolution of endosomes from other membrane compartments, e.g. endoplasmic reticulum, plasma membrane, Golgi, *trans*-Golgi network, ERGIC

Exocyst function

Plasma membrane domain targeting

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Exocyst vesicle trafficking – methodological summary

[\[Application Sheet S47a\]](#)

Exosomes and other microvesicles (mammalian)

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Extracellular vesicles (non-mammalian sources)

[\[Application Sheet S62\]](#)

GLUT 4 trafficking (self-generated gradient)

[\[Application Sheet S48\]](#)

Golgi and *trans*-Golgi network

See “Endoplasmic reticulum - rough/smooth fractionation - separation from Golgi”

See also “Membrane trafficking” for resolution of Golgi (or *trans*-Golgi network) from other membrane compartments – e.g. endoplasmic reticulum, plasma membrane, endosomes, ERGIC

Intracellular signalling

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Light mitochondrial fraction, analysis of

Continuous gradient

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Self-generated gradient

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See also “Lysosomes”

See also “Mitochondria”

See also “Peroxisomes”

Lipid rafts

See “Plasma membrane domains”

Lysosomes

Discontinuous gradient

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Methodological review

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See also “Light mitochondrial fraction, analysis of”

See also “Endocytosis analysis/lysosome/late endosome events”

Lysosomes (ER/endosomes/plasma membrane)

Continuous gradient

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Membrane trafficking (endoplasmic reticulum, plasma membrane, Golgi, *trans*-Golgi network, endosomes, ERGIC)

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Continuous gradient (long spin)

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Discontinuous gradient (sedimentation)

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Purification and analysis

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Protein localization (membrane *versus* cytosol)

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Storage granules (vesicles)

See “Secretory granules”

***Trans*-Golgi Network (TGN)**

See “Membrane trafficking” for resolution of *trans*-Golgi network from other membrane compartments, e.g. endoplasmic reticulum, endosomes, plasma membrane, Golgi, , ERGIC

C. SUBCELLULAR MEMBRANES (NON-MAMMALIAN)

Algae

Organelles (various)

[Application Sheet S59]

Amoeba

Organelles (various)

[Application Sheet S58]

Arabidopsis thaliana

See "Plants"

Bacteria

Extracellular vesicles

[Application Sheet S62]

Rhodospirillum rubrum:

Organelles, including acidocalcisomes

[Application Sheet S50]

Chlamydomonas reinhardtii

See "Algae"

Dictyostelium discoideum

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Fungi

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Phytomonas francai

See "Protozoa"

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Protozoa

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